User Manual

(Version:2.0)

Introduction

Installation

Graphic User Interface (GUI)

Configuration & Operation Via IR

Advance Network

Appendix

Preface

Notice

The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.
Note: Formosa21 will not be obligated to the responsibility outside the scope of DVR.

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Trademarked names are used throughout this manual. Rather than place a symbol at each occurrence, trademarked names are designated with initial capitalization. Inclusion or exclusion is not a judgment on the validity or legal status of the term.

Warning

To reduce risk of electric shock, do not remove cover. No user service-able parts inside. Refer servicing to qualified service personnel.
Do not expose this appliance to rain or moisture.
Do not install this product in hazardous areas where highly combustible or explosive products are stored or used.
Severe impact or vibration may cause malfunction.
Do not move this product when DVR is working.
Position it in an open space with flat surface, and also maintain at least 15 cm between the left and right sides of the body and the wall.
The lightning flash/arrowhead symbol, within and equilateral triangle, alerts the user to the presence of a shock hazard within the product's enclosure.

CE Warning

This is a Class A product, in a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

FCC Warning

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

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Important information

Before proceeding, please read and observe all instructions and warnings contained in this manual. Retain this manual with the original bill of sale for future reference and, if necessary, warranty service.
When unpacking your DVR unit, check for missing or damaged items. If any item is missing, or if damage is evident, **DO NOT INSTALL OR OPERATE THIS PRODUCT.** Contact your dealer or us for assistance.

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1. Introduction

A VP-100 package includes one VP-40 video capture card and a DVR on chip FLASH ROM. VP-40 supports 4 camera input ports. After install them in a PC, it becomes a dedicated DVR system after power up. The DVR System is a high performance digital video recorder with built-in mini web server and real-time video capturing capability. The video is grabbed and compressed for faster transmission to your PC through 10/100Mbps Ethernet. The video also can display through local VGA output . Besides, VP-100 supports digital recording function. It can record / playback / browse video simultaneously and save video data by cyclic recording to PC hard disk.

VP-100 supports full motion live video and audio through Internet, Intranet connection. When supporting more than 4 camera ports, extra VP-40 cards can be installed on the same PC of VP-100. A DVR on chip FLASH ROM can support maximum 4 VP-40 capture cards. This makes the PC supporting up to 16 cameras.

After installing VP-100, the PC is ready as a DVR. When power up, it starts local DVR functions such as monitoring through VGA output and recording to hard disk if it is configured to do that. For remote monitoring or access to historical data, you will have to set up the LAN or Internet environments and configure VP-100 IP information. When all these installation are done successfully, VP-100 delivers real-time full-motion audio/video transmission to anywhere anytime. A PC with Internet browser and our proprietary plug-ins software can do that. The camera can be remotely controlled to do zoom in and out, and the unit can be triggered to initiate certain events. Configuration of VP-100 can be done by an IR remote control unit or a mouse . A sample configuration is shown as below.

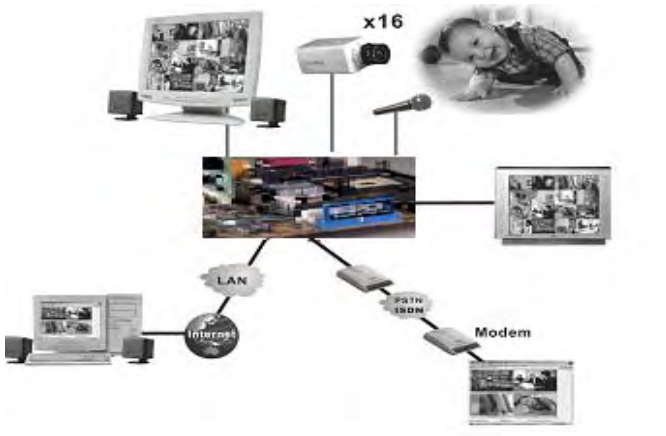


Figure 1.1 Network Configuration

1.1 Main Features for VP-100

- ✓ **Video & audio recording**
  - ■ Up to 8/12/16 camera inputs (color or B/W)
  - ■ Up to 30 fps on each camera for local monitoring
  - ■ Record / display / playback simultaneously
  - ■ Built-in QUAD / Multiplexes functions for local monitoring
  - ■ Local playback of recorded video on VGA or TV monitor
  - ■ Remote playback from PC browser
  - ■ Query recorded data by date, time & events
  - ■ Control well-known brand PTZ Cameras

- ✓ **High video quality and low data rate**
  - ■ Up to 200:1 video compression
  - ■ Multiple video compression engines: H.263, JPEG, M-JPEG, MPEG4
- ✓ **Network**
  - ■ Dynamic IP support for Internet access
  - ■ Direct Dial-up available
- ✓ **Backup**
  - ■ Removable Hard Drives
  - ■ Optional CD-RW / DVD+RW
- ✓ **Easy to use**
  - ■ Plug and play, non-Windows embedded real-time OS
  - ■ Easy configuration via keyboard, IR Control, Home Page or RS-232 port
  - ■ Standard web browser as the client application
- ✓ **Alarm function**
  - ■ Motion detection / Event trigger / Schedule / Pre-alarm recording
  - ■ E-Mail & FTP alarm notification
  - ■ Optional GPI/O for alarm control
- ✓ **FW1.3 New Features for VP-100**
  - ■ Point of sales DVR Integration
  - ■ USB mouse support
  - ■ SATA HDD support
  - ■ Low-bandwidth support
- ✓ **FW1.4 New Features for VP-100**
  - ■ Alarm log
  - ■ Import searching function for more user friendly
  - ■ Weight recording
  - ■ Water mark support
  - ■ Modify POS License to three versions.
  - ■ Selectable 30 days recorded files auto deletion function
  - ■ Network Neighbor function support
- ✓ **Customization**
  - ■ Supports HTML file upload for home page customization
  - ■ Supports FTP Server upload for customization

1.2 Product Specifications:

Model	**VP-100***
Channels/Card	4
Display FPS/Card	120fps
Rec. FPS/Card (320X240)	120fps
Audio In/Card	1
Alarm In/Card	4 in/4out (optional)
Compression Standard	MPEG4 / JPEG / M-JPEG / H.263
Minimum System Requirement	Pentium IV 2.6GHz CPU or better 512MB DRAM One IDE slot for DOM Chip AGP VGA Card
Browser Compatibility	Win 98 /2000/XP running MS Internet Explorer 6.0 or later
Communication Protocol	Support TCP/IP , DHCP , NTP , HTTP , FTP ,UPNP
Backup Function	IDE or USB Interface HDD, CD-RW, DVD+RW
Language	English , Traditional Chinese

Note: Could use more powerful CPU to get the maximum frame rate.

1.3 System Requirements

Composite CCD camera, V8 or camcorder… (NTSC or PAL standard)

The equipment for connecting to network:

1.Network mode: RJ-45 Ethernet network port connected to Internet and a public IP address

2.Others: RS-232 Port and a serial cable for connecting to host PC.

3.A VGA or TV monitor for display.

PC for installing VP100

NOT EVERY PC PLATFORM CAN BE USED FOR VP100 INSTALLTION. PLEASE REFER TO MOTHER BOARD SUPPORTING LIST IN APPENDIX.

PC for the configuration / browsing

1. Pentium 4 CPU or better, desktop PC or notebook
2. 256 MB RAM or above
3. AGP VGA Card
4. Microsoft Windows 95/98/2000/ME/XP or above
5. Internet Browser (such as Netscape Navigator 4.0 or Microsoft Internet Explorer 6.0 or above)

2. Getting Started

2.1 Summary of the installing

Before install VP-100 to your PC platform, please make sure the PC's Hardware is compatible with the motherboards, which we have recommended in the appendix.

VP-100 contains:

Description	Quantity
VP-40 Capture Card	1
DVR on chip module (DOM)	1
IrDA Controller & receiver	1
Manual CD	1
Quick reference manual	1
Yellow IDE Cable	1
Watch dog Wire	1
Battery	2

Plug VP-40 onto the PC's PCI slot. There is a flat cable comes with a DOM. Insert one end of the flat cable into primary IDE slot. Then insert DOM to the slot at middle of the flat cable. There is also a power cable comes with the DVR chip. Plug one end of the power cable to PC's DC power plug and then insert the small power plug into DVR chip. Please refer to fig 2.1 below for detail.
After complete the above installation, connect a VGA monitor to the VGA output of the PC. You will need a LAN card on the PC for remote access. The VGA & LAN cards use on the PC shall both be compatible to the supporting list, too.
Maximum of two hard disk units install on secondary IDE slot is recommended. You can install a third hard disk at primary IDE slot as a slave unit. But this is NOT recommended. Please contact your local reseller or Formosa21 customer service for more information.

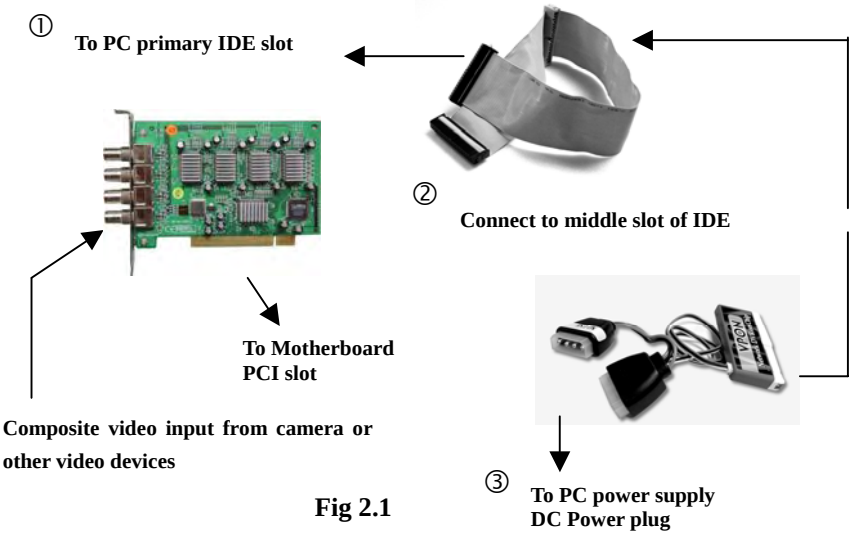


Fig 2.1

Connect video signals to the camera input ports of VP-40. These signals can be Camera, VCR, TV or VCD/DVD player as long as they are NTSC/PAL compatible composite videos.

2.2 Installation

Step 1 : Installing Motherboard

We recommend motherboards that support Linux device drivers. If you purchased a non-recommended motherboard yourself make sure it works. We are not responsible for non-approved motherboards. We carry recommended motherboards for system integrators to use. Put the motherboard together just like a regular PC.

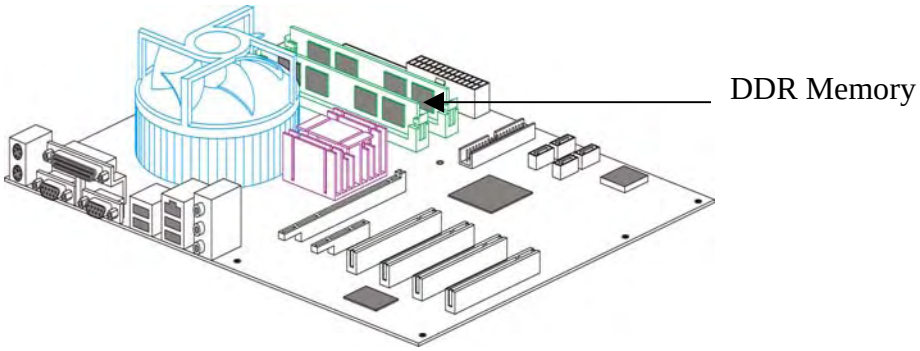
Step 2: Installing CPU

We recommend any Pentium 4 Class CPU. Install as usual and attach the heat sink and fan.

Step 3: Installing Memory

We recommend installing a good brand name 256MB DDR memory.

NOTE: If you choose MPEG4 compression standard, please install 512MB DDR memory.

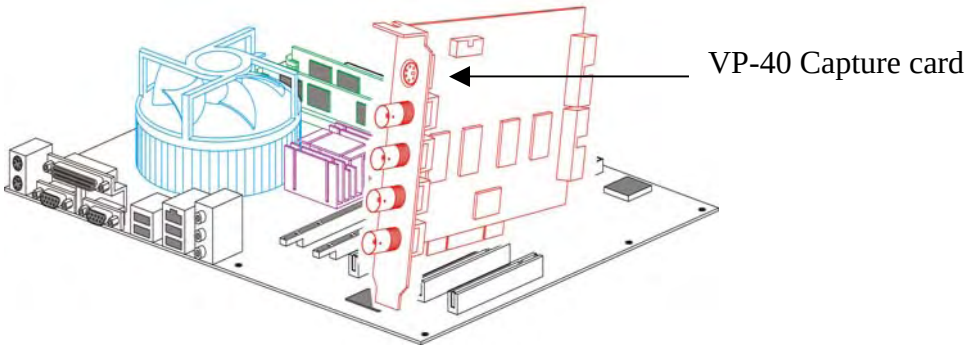


Step 4 : Installing VGA Card

We recommend VGA cards as in supporting list (Please check appendix) .We carry VGA cards for system integrators. Insert the VGA card into the AGP slot. Not all VGA cards will work due to unsupported Linux device drivers.

Step 5: Installing VP-40 Capture Card

Our capture card is proprietary and will only work with our DVR chip. Install the capture card into an available PCI slot. Once the system boots the DVR firmware will automatically detect how many capture cards are in the PCI slots.



Step 6: Installing the hard drives

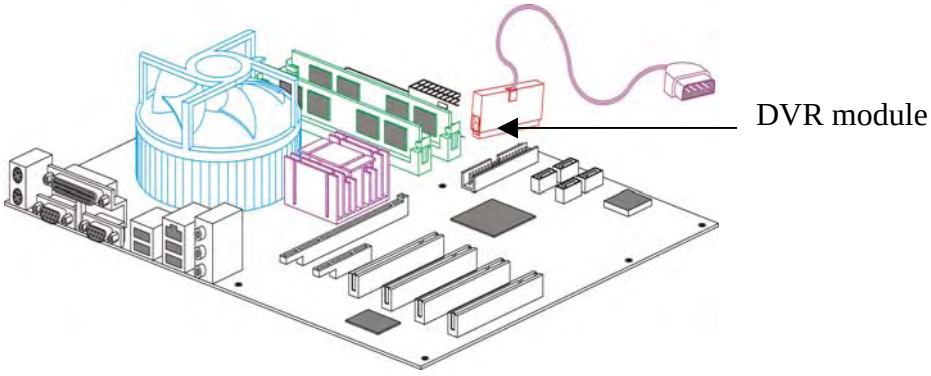
For a single drive make sure the jumper settings is set on primary. Attach that with any ordinary IDE cable onto the secondary IDE channel. For dual drives make sure one hard drive is set on primary and the

secondary on slave. Attach those to the IDE cable and plug into the secondary IDE channel. The max hard drive size supported is 500GB each. For a total of 1TB.

Note: When VP-100 based DVR is working for the first time, the system will erase the data in the hard disk. If there is important information in the hard disk, please remember to backup the data in another storage before the hard disk is used in the VP-100 based DVR.

Step 7: Installing the VP-100 DVR module

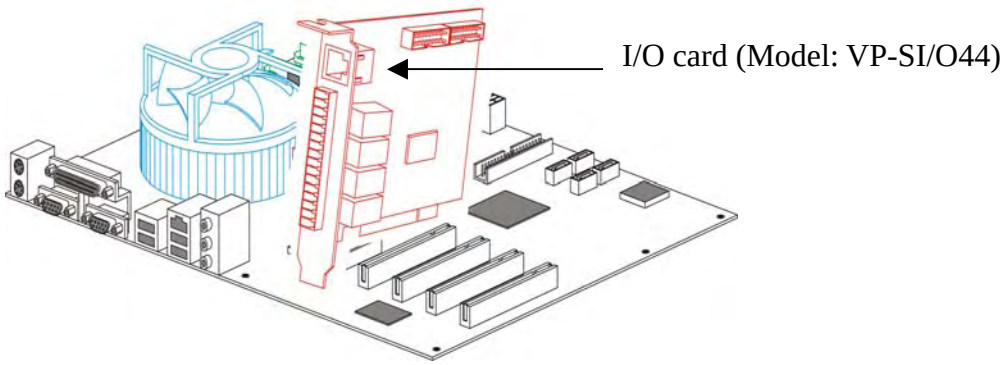
The VP-100 DVR module sits on the primary IDE slot on the motherboard. If attaching a CD-RW to your unit then put the VP-100 DVR module in the middle of the yellow IDE cable included. And then put the end of the yellow IDE cable to the CD-RW and the other end to the primary IDE channel. The yellow IDE cable must be used with the VP-100 DVR module and not any generic IDE cable. Then attach the power connector from the VP-100 DVR module to a free lead from the power supply.



Step 8 : Installing I/O Card (Optional)

GPI and GPO are use for alarm inputs and outputs control.

Note: I/O card is an optional device; if you need it please contact us.



Power Supply

We recommend using a 400W ATX power supply for the DVR unit.

2.3 Power On

After complete the installation , you can power on the PC as usual. Live videos should be displayed on VGA screen if everything is OK.

2.4 Configuration

When you get videos display on VGA screen, you can configure the VP-100 PC DVR unit using mouse or the IrDA controller comes with the VP-100 package. Please refer to **User manual** "**Chapter 3**

operating DVR by mouse , Chapter 4 Operating DVR by IrDA controller.

Change from GUI mode to IR mode

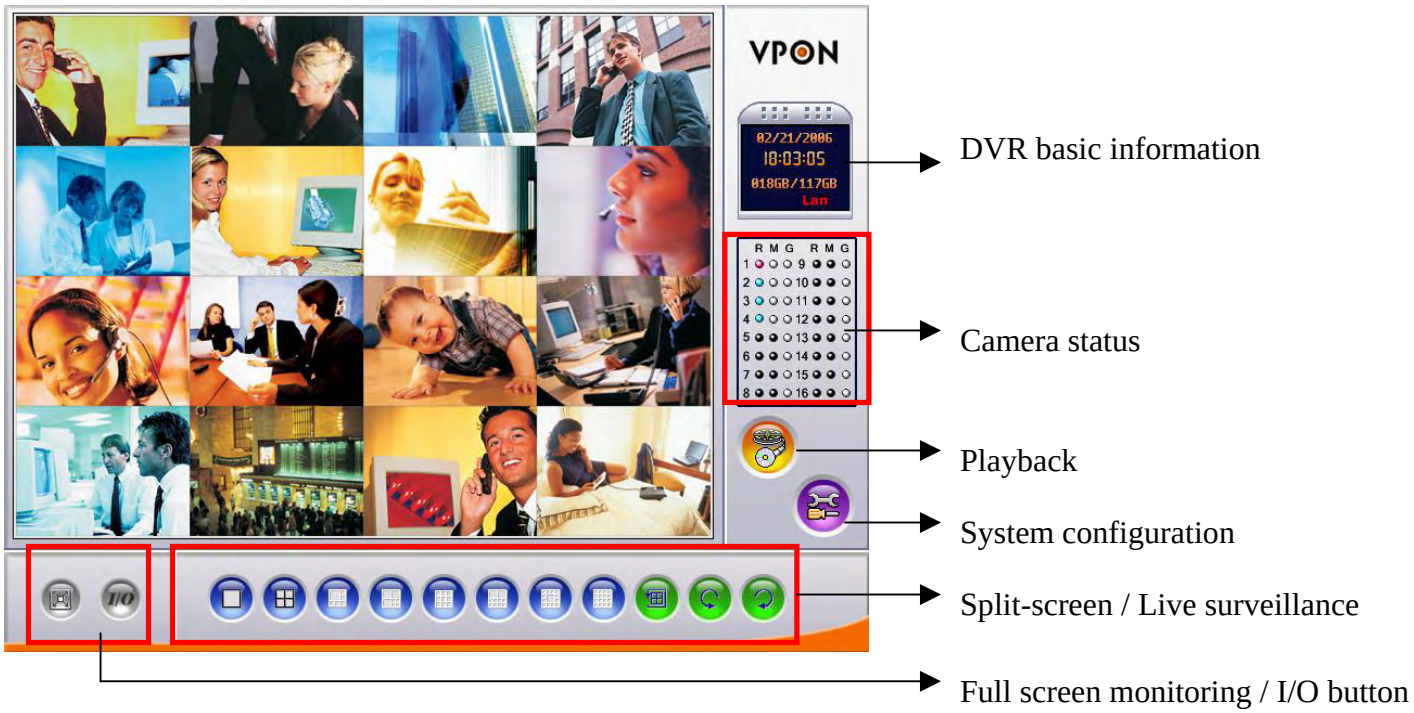
Default operation mode is GUI mode. DVR provides a GUI mode with mouse support. Be sure to plug in a PS2 mouse at the back of the unit before or when it starts to boot. Go to the running mode in the system settings. Change it from mouse mode to IR mode. The unit will reboot. Mouse mode is the only mode where a log can be found.

3. Graphic User Interface (GUI)

3.1 Introduction

VP-100 can be configured using either the supplied remote control unit (or a keyboard) or a mouse. This chapter covers mouse operation. The VP-100 must be in GUI mode for mouse operation. Under GUI mode, keyboard is used ONLY for data entry.

Local surveillance GUI:



DVR basic information: including date, time, total hard disk size and LAN status.

Camera status:

R

Color	Recording Mode
Gray	No video signal
Blue	No recording
Red	Full recording

M

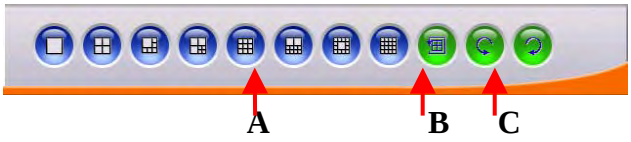
Color	Motion detection Status
Gray	Motion not detected
Yellow	Motion detected

G

Color	Status of each DI and DO device.
Gray	DI or DO not detected
Red	DI or DO was detected

3.2 Surveillance screen panel

The Surveillance Screen Panel enables you to define which live images are displayed on screen.



A. Selectable 1 / 4 / 6 / 7 / 9 / 10 / 13 / 16 split-screen display

B. Use the sequence button to automatically cycle through all the connected cameras

C. The arrow buttons to get previous or next camera

Enlarge button

Click the enlarge button to switch to full screen live video display.

Double click mouse right button to switch back normal live video.

3.3 Setup Video Quality

Use the video quality button to set all the video parameters for the cameras connected to the VP-100.

1. First, please change to single screen as following .

2. Press the set quality button , you can see the **Brightness** , **Contrast** , **Saturation** , **Hue** , **Quality (All) control** panel.

Brightness- adjusts the amount of light or brightness for the selected camera according to your preference.

Contrast - adjusts the difference between light and dark areas or contrast for the selected camera according to your preference.

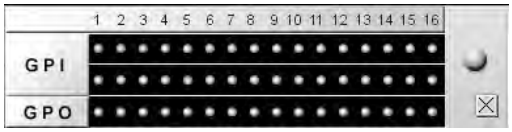
Saturation - adjusts the amount of color for the selected camera.

Hue - adjusts the dominant color for the selected camera.

Quality (All) - adjusts the video quality for all cameras. The default setting is 80. We recommend that you do not set this to 100 to avoid slow video transmission rate and using up too much hard disk space.

3.4 I/O button or

Click the “I/O” button to display the I/O panel.



When an alarm is triggered, the GPI and GPO that are connected will show the status of the input or output device. Colors will change on the GPIO panel when the corresponding GPIO points are activated.

3.5 POS button

Click the “POS” button and the screen will show as below.

1. Firstly, please change to single screen as following .
2. After the “POS” button is pressed, the POS panel will appear at bottom of the screen.
3. POS transaction data with video will show on the screen and data ONLY on pos panel.

3.6 PTZ Control

PTZ panel

After setting PTZ in the camera setup section , user can use the PTZ panel to control PTZ (Pan, Tilt, Zoom) cameras. This panel is displayed when change to single screen.

PTZ panel: You can do preset and recall, zoom in/out, focus, iris control to current camera.

Preset buttons- Save current camera position. You can save totally16 preset positions

Recall buttons- Move the camera to the selected preset position.

ZOOM buttons - adjust the zoom to provide a more closer or wider view of the subject.

FOCUS buttons - adjust the focus of the camera.

Speed buttons - Adjust the moving speed of the selected PTZ camera.

PTZ OSD menu / patrol / auto pan – Using OSD menu to control PTZ .The " " button is ok," " button is cancel.

Pan and tilt buttons - Adjust the pan and tilt of the selected camera include 45 degree directional PTZ control at upper right, upper left, button right, button left of PTZ control panel

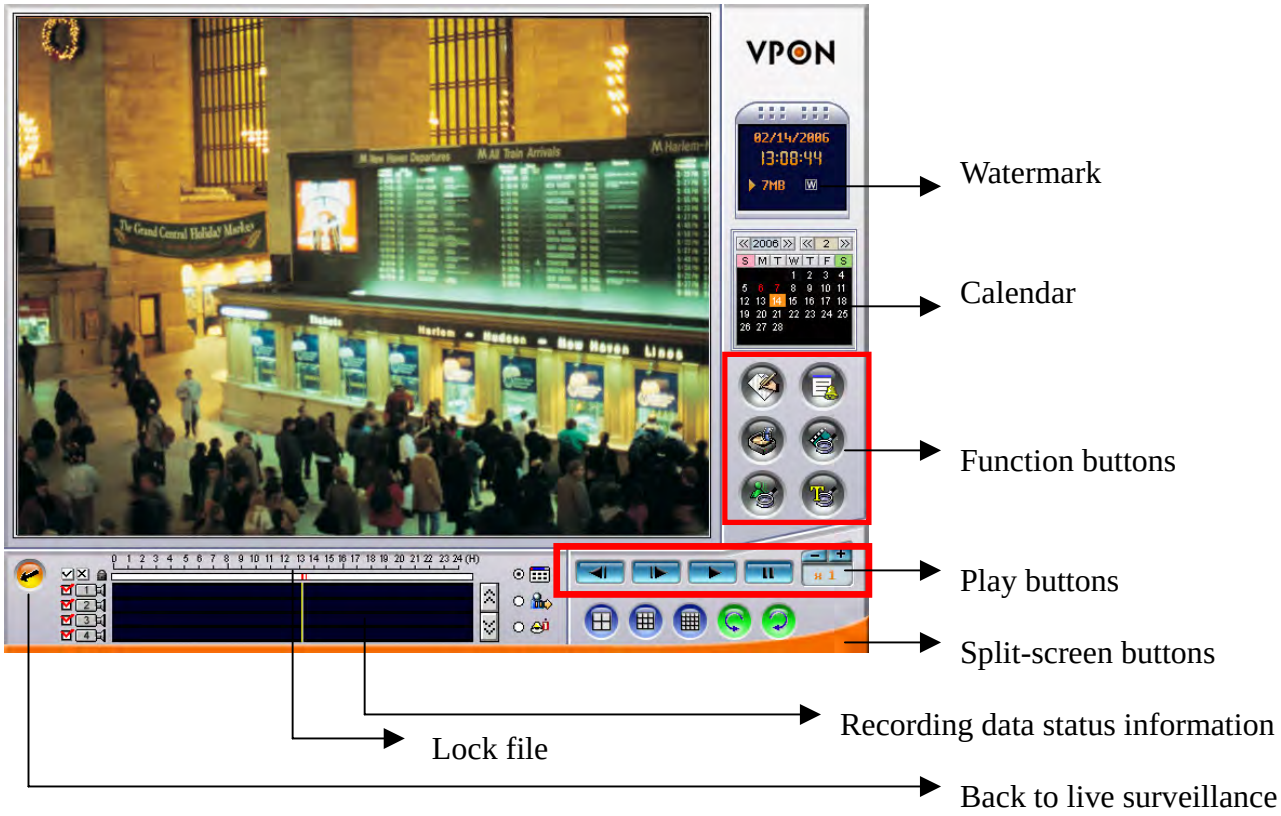
To set a camera configuration:

1. Select a camera using the numbered buttons (1~16) on the Surveillance Panel.
2. Adjust the Zoom, Focus, Speed, Pan and Tilt buttons until the camera is configured correctly.
3. Press a Set button to save the configuration.

The configuration you have saved can now be recalled with the corresponding Call button.

3.7 PLAY button

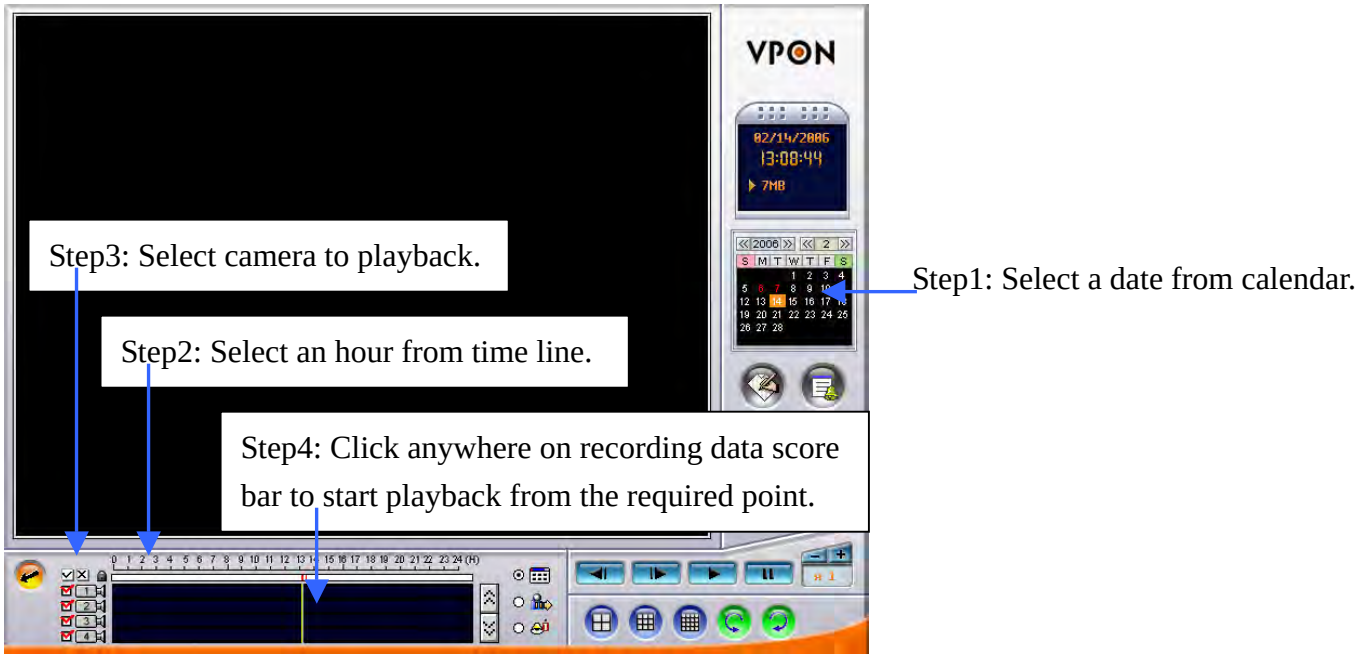
Click the PLAY button for playback the recorded files in the hard disk.

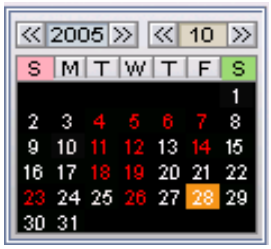


Function buttons:

1. Bookmark
2. Alarm log
3. Backing up the data
4. Thumbnail Browse
5. Search by Event
6. Search by Text

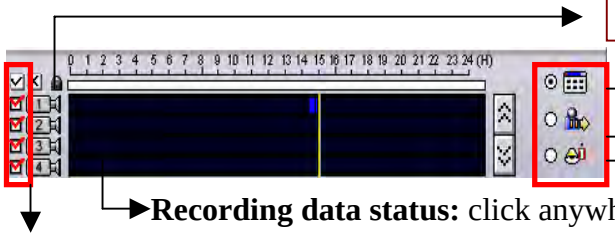
How to play recording file:





Date Color	Meaning
Red	Have recording data
White	No recording data
Square	Today's date
Orange	The day that was selected for playback

Lock file: click the score bar under time line can lock file to keep the file not been erased by HDD cycle back writing



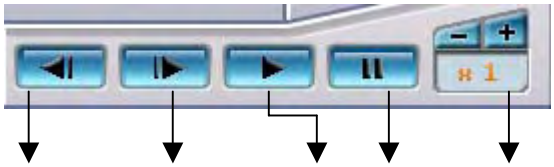
Click to show normal recording status
Click to show motion detection recording status
Click to show alarm trigger recording status

Recording data status: click anywhere on score bar to start playback from the required point.

Select camera: enables you to select which camera images to display on screen.

1. Play buttons:

Use the Play buttons to control playback of stored footage from the cameras.

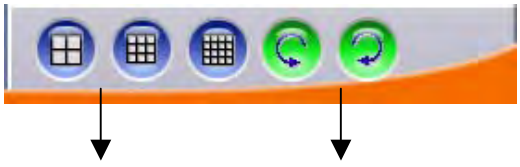


Step backward Step forward Play Pause Control playback speed(1/8x ~ 4x)

The fastest speed of the single image playback is 4x; slowest speed is 1/8x. Click "+" button once to double playback from normal. Click "-" button will decrease playback speed.

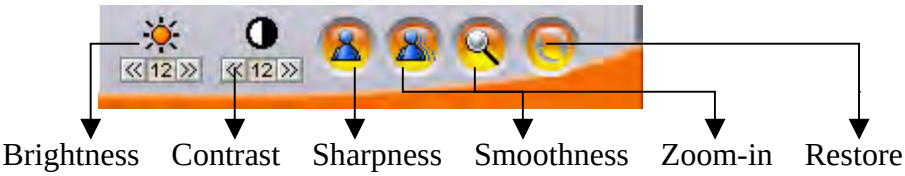
2. Split-screen display buttons:

Split-screen display buttons enables you to define which split-screen is displayed on screen.



Selectable 4 / 9 / 16 split-screen display. The arrow buttons to cycle through all connected cameras.

3. Brightness/Contrast / Sharpness / Digital Zoom in playback – When pause playback, the brightness; contrast or sharpness of the image can be adjusted. User can also zoom in specific point of the image to get clear view.



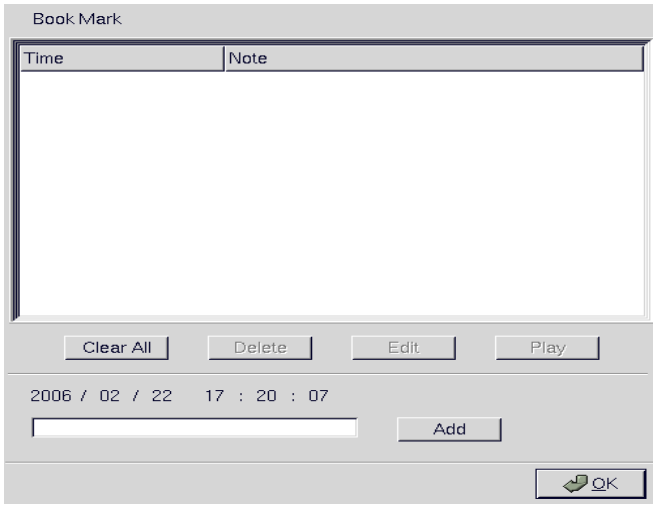
Brightness Contrast Sharpness Smoothness Zoom-in Restore

4. Status Button

The status panel displays the playback status of the current recording. The aqua line (**Data**) indicates record data over an one hour time interval. The yellow bars (**Motion**) indicate the instance when motion was detected. The (**GPI**) indicate when a GPI event was detected. The moving orange line indicates current playback status. Click anywhere on the Data, Motion, or GPI lines to start playback from that point.

3.8 Bookmark

User can have bookmarks at the specific time during playback.

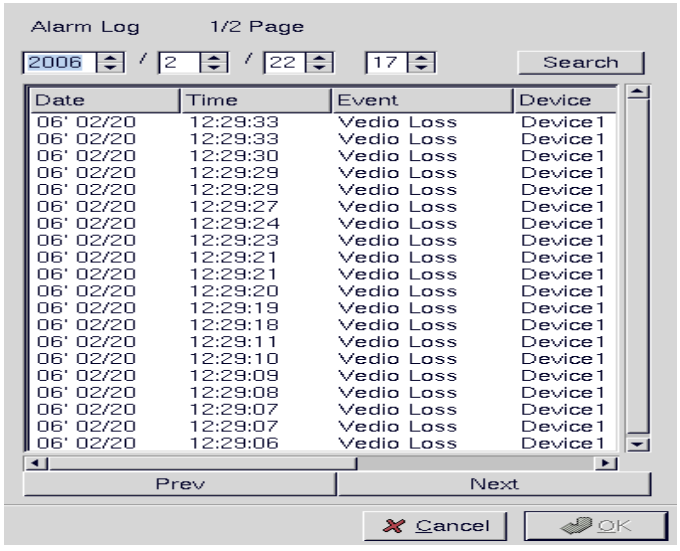


Bookmark:

1. During playing recording file user can click “bookmark” button to mark the specific time point.
2. User can write down the note and click “Add” button to save it.
3. Select one of the lists of recording file in bookmark field and click “play” button to playback.

3.9 Alarm log

Any alarm will be written into alarm log including motion trigger、GPIO trigger、Disk error、Video loss、POS event.…..etc. User can search alarm log by specific time and double click one of the alarm log on the list to playback the video.



3.10 Backing up the recorded files

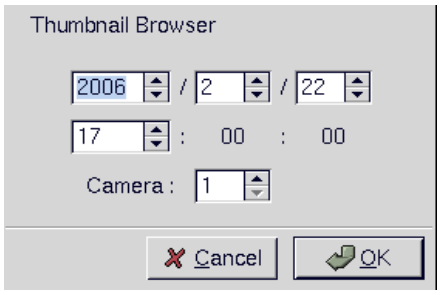
If the DVR is equipped with CD/RW, DVD+RW drive, you can back up your recorded files to a CD, DVD, or USB hard drive.

Note: The DVR will take some time to collect data before it can start back up process.

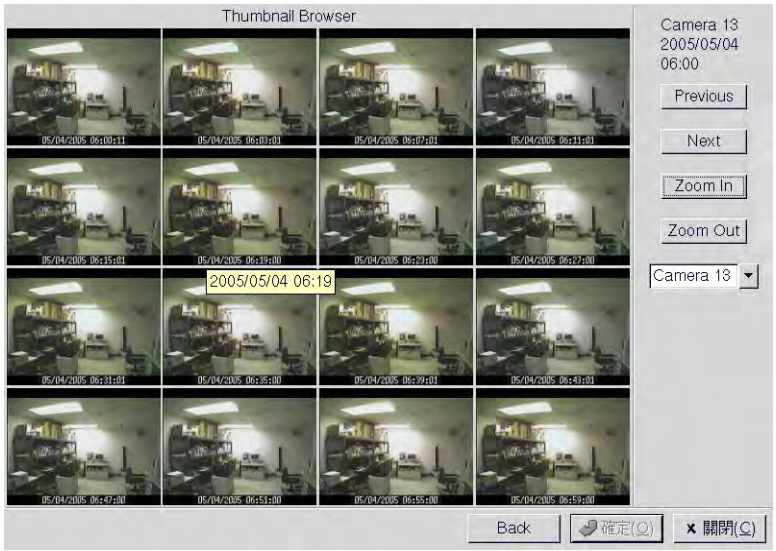
3.11 Thumbnail Browse

Finds video images and selects them for processing individually, in whole folders, using a simple time selector and built-in image viewer .you can check out the results with the built-in viewer.

1. Select search starting time and camera.



2. Using a simple time selector and built-in image viewer .you can check out the results with the built-in viewer.



Previous - Search forward

Next - Search backward

Zoom in - The whole Thumbnail search was divided to three layers. The first layer is hourly based. Each picture on the windows is the first picture of that hour。When select a specific hour to do Zoom in, it goes into second layer. The second layer displays 16 pictures based on evenly divided time slots in this hour。Then if any one of these pictures is selected to do Zoom in，it goes into the third layer. This layer displays 16 pictures from left to right, that are most close to the time slot of layer two。

Zoom out - Back to one layer up。

Back- Back to Thumbnail Browser window

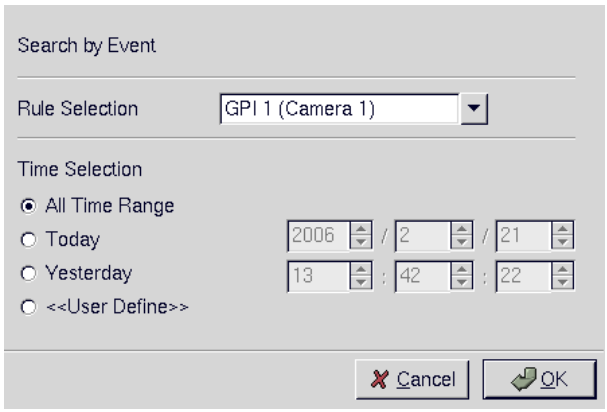
Ok - Start playback recorded file

3.12 Search by Event

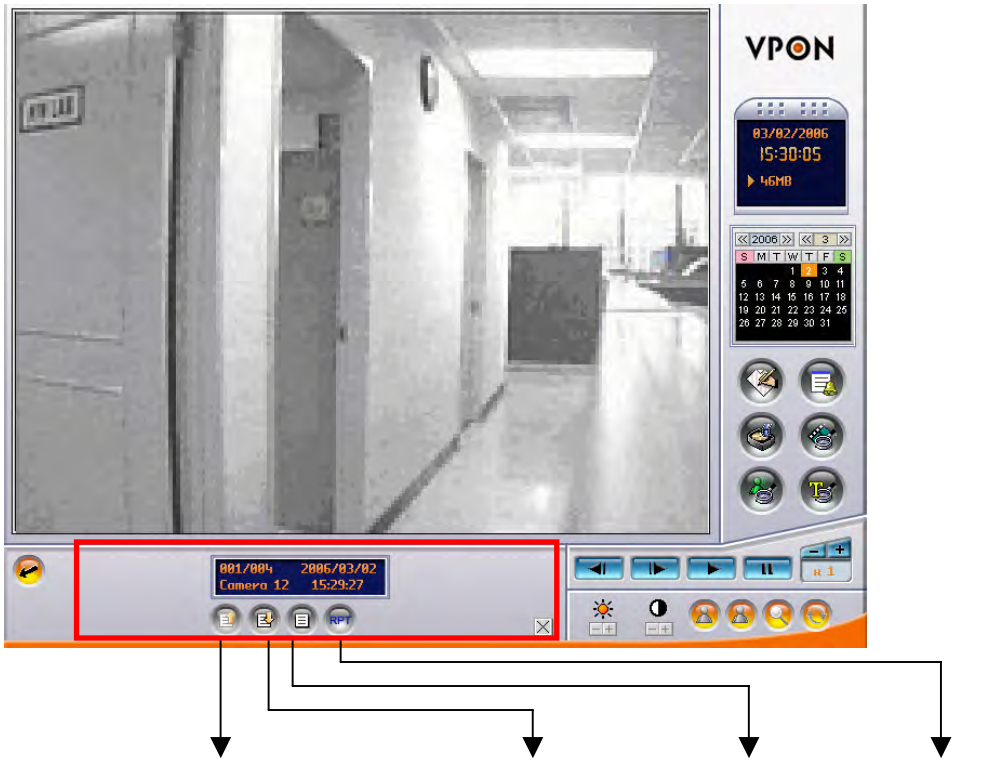
Searches the list of recorded files for the specified event such as a specific area of motion or a GPI Trigger that occurred within the specified time interval.

Search by GPI Trigger:

1. Rule Selection- choose one of **GPI 1~16**.
2. All Time Range- Select “All Time Range”、”Today”、”Yesterday” or “User Define” for quicker searching.
3. Click “ok” to start search GPI Trigger files in the specific time.



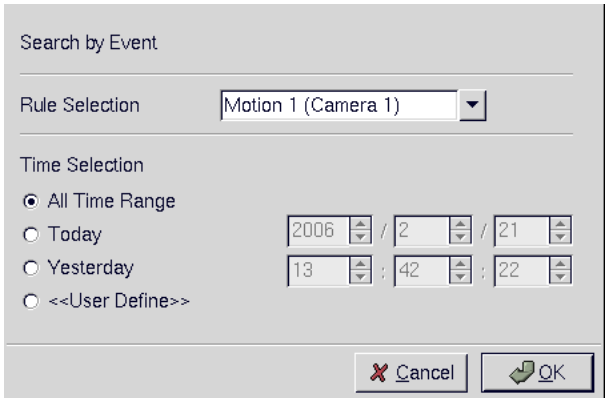
4. Search results are as follow:



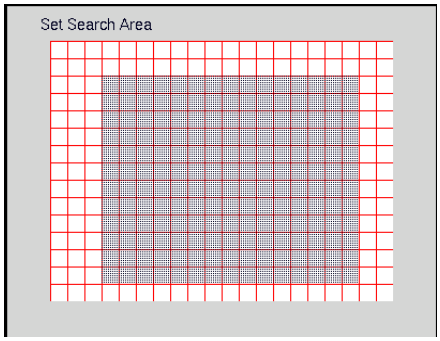
Previous search result / Next search result / Search result list / repeat

Search by Motion:

1. Selection Rule – Select from one of Motion **1~16**. All Time Range- Select “All Time Range”、”Today”、”Yesterday” or “User Define” for quicker searching.
2. Click “ok” to start search motion files in that specific time.



3. And then define search area .



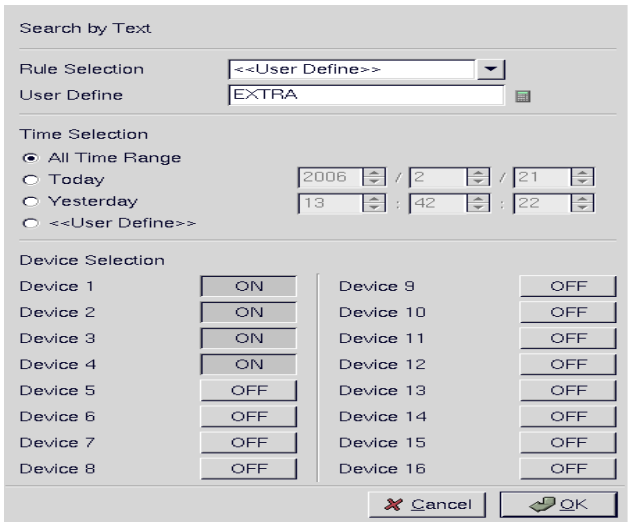
4. Click “ok” to start searching motion files in that specific area.
5. Search results are as follow:

Previous search result / Next search result / Search result list / repeat

3.13 Search by Text

Searches recorded files that contain POS information of specified text.

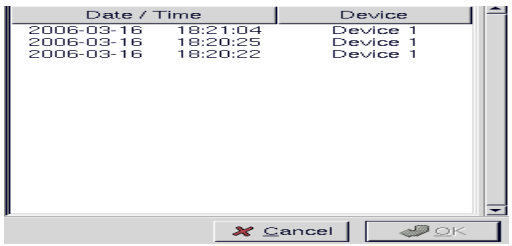
1. After define POS text , select search starting time and camera .



2. Search results are as follow:

Previous search result / Next search result / Search result list / repeat / Enable or disable pos data

Note : Click the “search result list” button to playback the pos data.



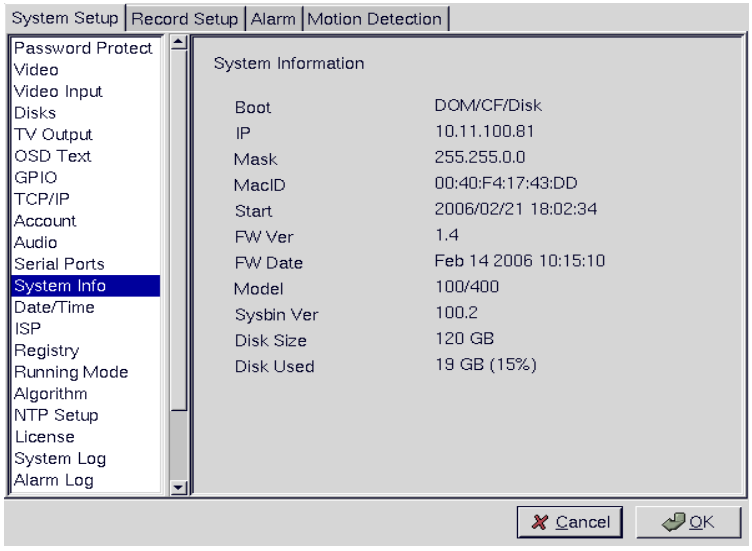
3.14 Close playback screen

Stop playback recording file and back to the recording file list menu.

[System setup]

3.15 Setup

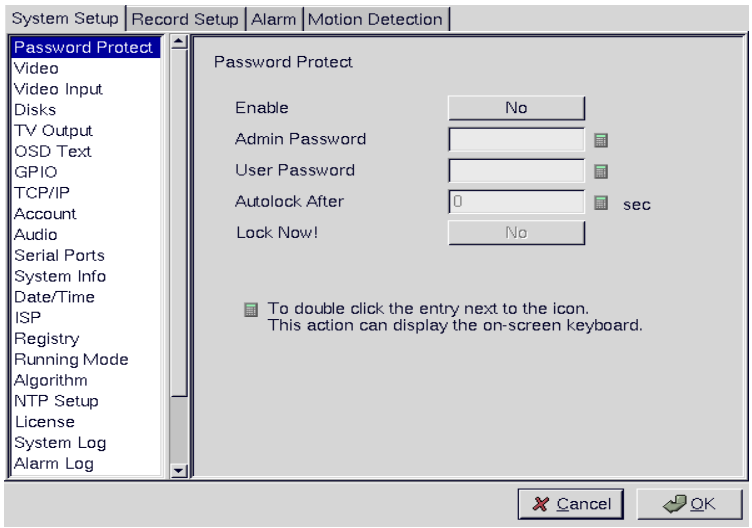
Click the Set Up button to show VP-100 configuration set up the menu. There are three parts to the Set Up menu - **System Setup, Record Setup, Alarm and Motion Detection.**



This section explains each of the menu pages in turn.

3.15.1 Password Protect

The Password Protect screen helps you to enable password protection, set administrator and user passwords, set the auto lock period and lock the system immediately. Enabling password protection prevents unwanted users from accessing or configuring the VP-100.



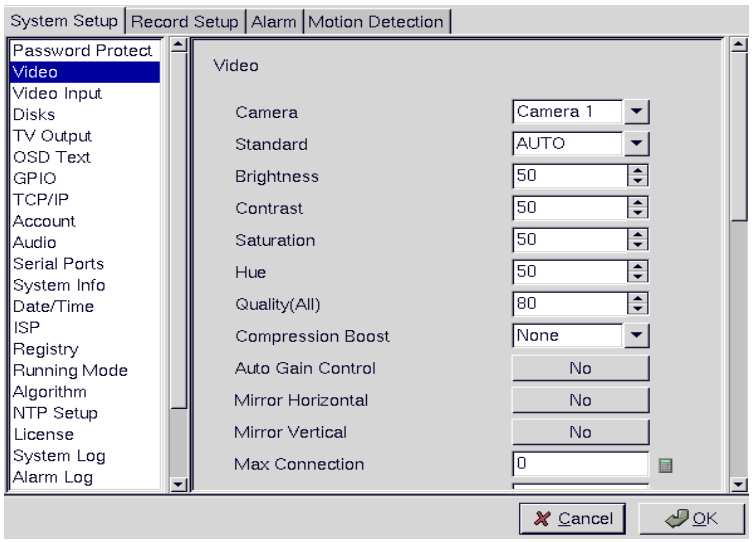
Enter new passwords for Admin and User in the corresponding fields. Set an auto lock time if required in the Auto lock after field. The auto lock function locks the system after a given time and a password is required to unlock it. Click Lock Now! to lock the system immediately.

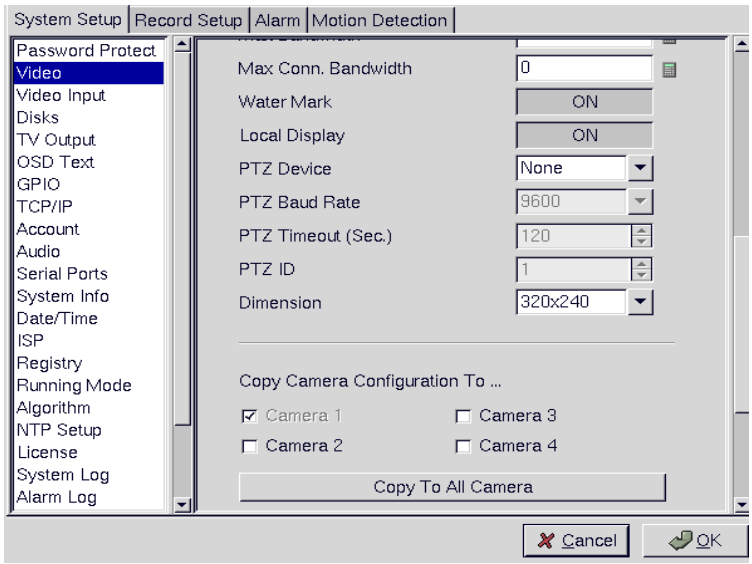
Note: If you do not have a keyboard connected to the system, you can use the on-screen keyboard to

enter your passwords. All the fields that can be edited using the on-screen keyboard are indicated by the on-screen keyboard icon. Double-click the field to display the on-screen keyboard. Use mouse to enter characters for the required field.

3.15.2 Video

The Video menu enables you to set video parameters such as the video standard and so on for each of the connected cameras. Select the camera from the Camera drop-down box and fill in the details in each field as required using mouse.





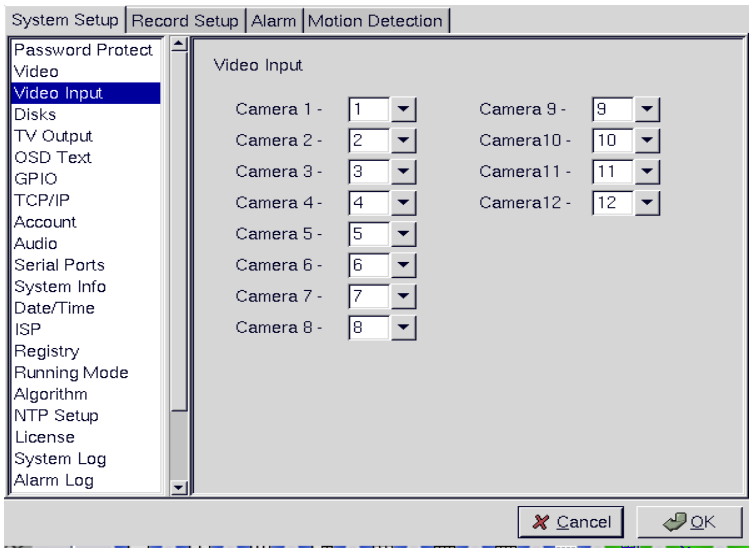
Standard: sets the video signal format. Choose NTSC in the US, or PAL in Europe and most Asian countries. If you are not sure about this option, select Auto. VP-100 will detect the video standard automatically.

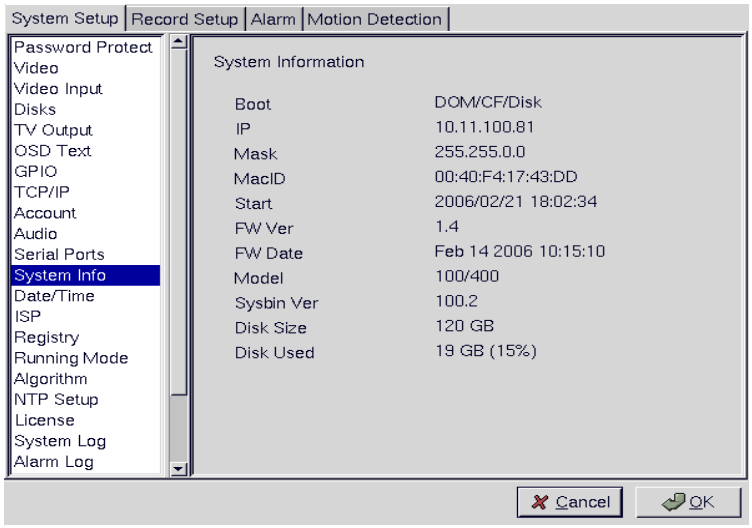
Brightness: adjusts the amount of light or brightness for the selected camera according to your preference.

Contrast: adjusts the difference between light and dark areas or contrast for the selected camera according to your preference.
Saturation: adjusts the amount of color for the selected camera.
Hue: adjusts the dominant color for the selected camera.
Quality: adjusts the video quality for each camera. The default setting is 80. We recommend that you do not set this to 100 to avoid a slower rate of video transmission and using up a significant amount of hard disk space.
Compression Boost: enables you to compress the video signal to save disk space and thus extend recording time. It is recommended to keep this setting to None. The higher the compression boost, the lower the video data rate. For a significantly lower data rate, we recommend you use the H.263 algorithm.
Auto Gain Control: enables automatic gain control to adjust the video signal strength.
Mirror Horizontal: flips the video signal from the selected camera along the horizontal axis.
Mirror Vertical: flips the video signal from the selected camera along the vertical axis.
Max Connection: limits the maximum number of connections allowed to access the VP-100 over the Internet. Set to zero to allow the maximum number of connections.
Max Bandwidth: sets the maximum bandwidth in bytes/second that can be used by users connecting to the VP-100 over the Internet.
Max Conn. Bandwidth: sets the maximum bandwidth allocated for each connection to the VP-100. This is the maximum bandwidth divided by the maximum connections.
Water Mark: Sets water mark on the video image.
Local Display: enables viewing the selected camera video signal on the local display. If this option is set to Off, the camera is still optional and its video can be recorded if needed.
PTZ Device: Choice one PTZ from our support list. If user can't find out PTZ camera, please contact us.
PTZ baud rate: each camera have different baud rate, please set correctly.
PTZ time out: The timeout value represents the time given to the cameras to respond to a command.
PTZ ID: each camera can define different ID, please set correctly when you have up to 2 PTZ cameras in one system.
Dimension: sets 320 x 240 or 640 x 480 resolution for each camera.
Copy Camera Configuration To : User can select cameras and press "ok" button to copy the configuration of current camera to the selected cameras.

3.15.3 Video input

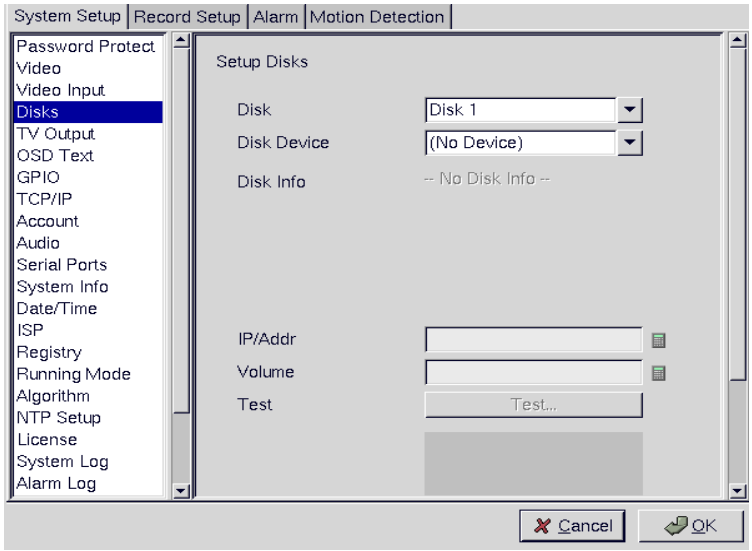
To map physical camera inputs onto video window positions on the display screen. You don't have to map camera#1 to position#1 as in the example below. You can map camera#1 to any position from #1 to #12.





3.15.4 Disks

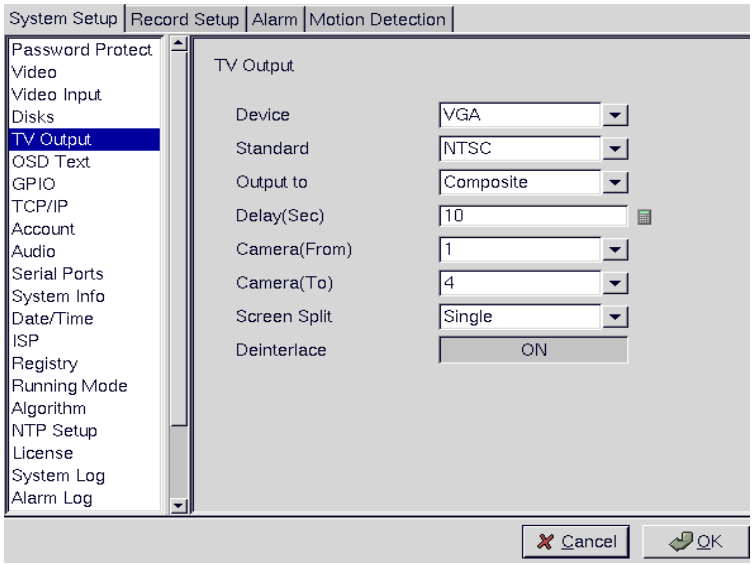
Use the Disks menu to configure network disks that the DVR uses to record data. If no disk is connected, (No Device) appears in the Disk Device field.



Use keyboard or mouse to enter the IP address and Volume of any connected network disk. Click on the Test button to test if the drive is working correctly.

3.15.5 TV output

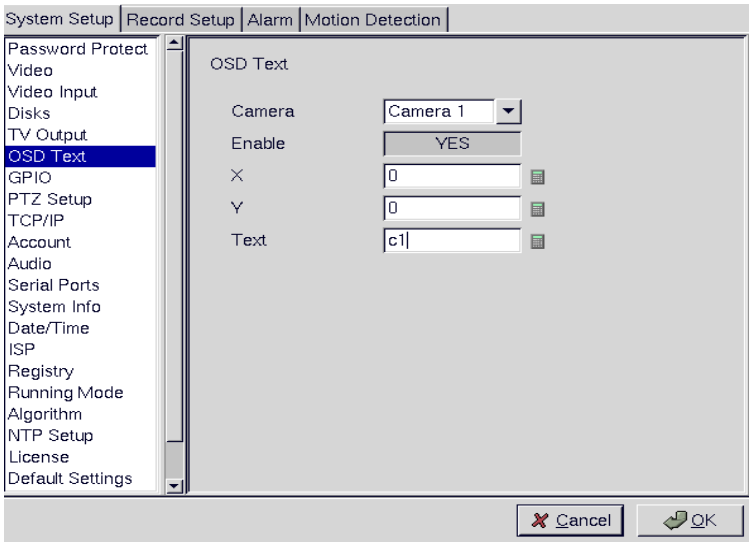
Use the TV Output menu to configure the video output for the VPON DVR. The VPON DVR can support standard VGA computer monitors or TV type screens. Set the device type, standard, outputs and other parameters. Set the Camera (From) and Camera (To) options to specify the range of cameras that are displayed in the cyclic display mode. Software based De-interlace support.



Use mouse to set each field. Ensure each field is set correctly before clicking OK. If parameters are set incorrectly it could result in the display becoming unreadable and very difficult to correct.

3.15.6 OSD Text

Use the OSD Text menu to assign text for each of the connected cameras. For instance, you may like to have text saying “c1” on the image from a camera installed in the c1.



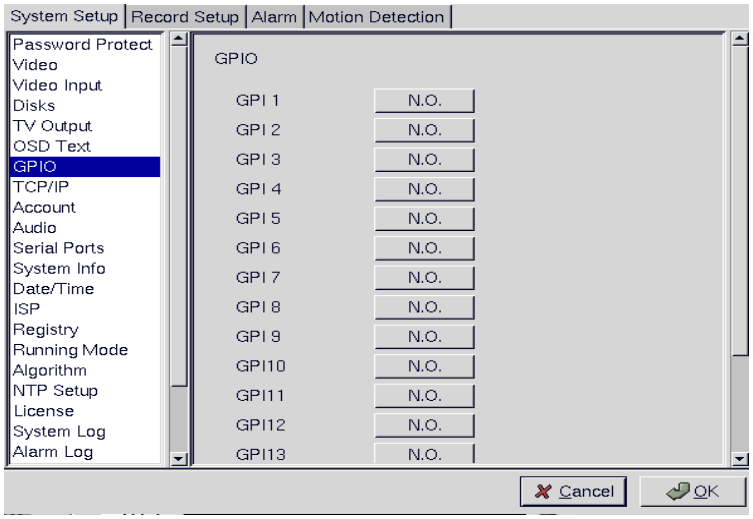
To display the OSD text:

1. Select the desired camera from the Camera drop-down box.
2. Click the Enable field to display the text.
3. Adjust the position of the text display on the image using the X and Y parameters. A value of X=0 and Y=0 would result in the text appearing at the top left corner of the camera image. Increasing the value of Y moves the text down the screen. Increasing the value of X moves the test the right. Enter the text to be displayed in the Text field.

4. Use the mouse to complete the fields and click OK to save changes.

3.15.7 GPIO

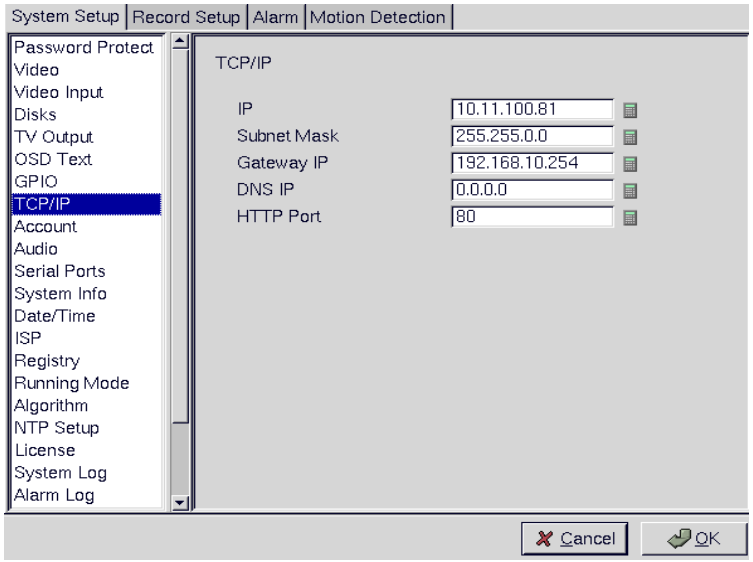
The GPIO (general purpose input output) menu enables you to view the status of the input and output devices such as switches, sensors, LEDs, and so on and view their status. These devices can be attached to the unit to turn external alarms (outputs) on or off when the specified input changes. When an alarm has been triggered, the GPI and GPO that are connected will show the status of the input or output device. GPI devices will show NC (normally closed) or NO (normally open) as the status of the switch. Depending on the input, you can change the status of the GPO devices to On or Off as required.



Change the GPO status as needed. Make sure that the devices are working by checking the actual physical status of the inputs and outputs after making changes in this menu.

3.15.8 TCP/IP

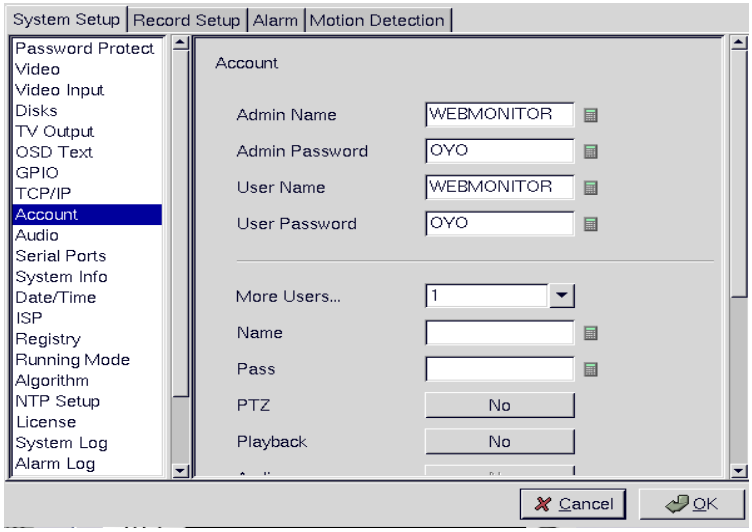
Use the TCP/IP menu to enter TCP/IP address details for the VP-100.



3.15.9 Account

Use the Account menu to set up an administrator name and password as well as the super user name and passwords. You can also use this menu to set up to 256 additional users, their passwords and their permissions on the system. Select the user number and assign a Name and password to it. Click the PTZ,

Playback, and Audio fields to enable access to these properties for the selected user. Select the cameras that you want the user to have access to and set them to **Yes**.

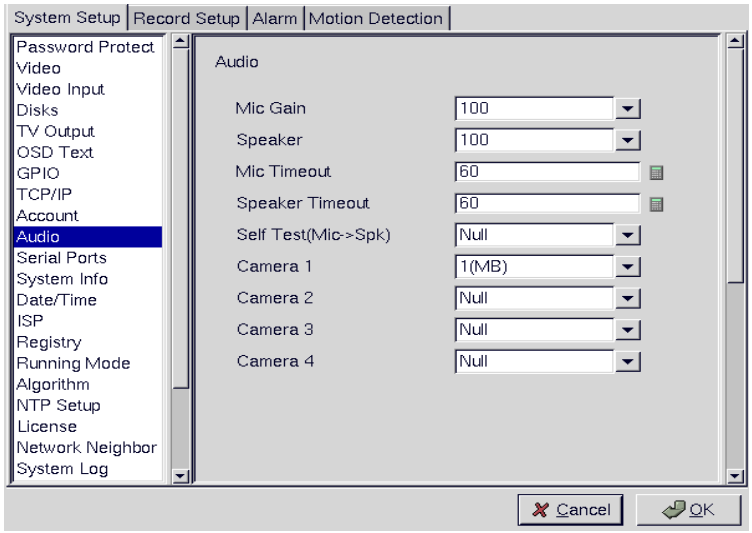


Note: It is important that you set up the super user name and password. The super user is different from the administrator and has access to only live videos and playback files. Use the More Users field to change the authorities of Internet users.

3.15.10 Audio

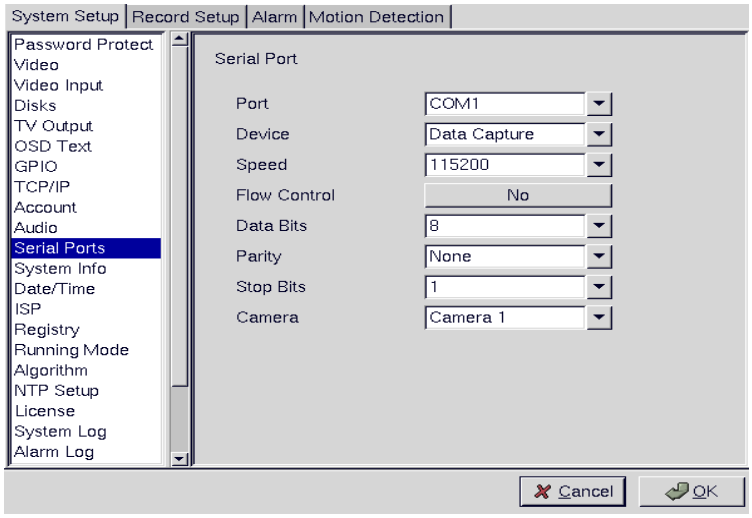
Use the Audio menu to set parameters such as Mic Gain, Speaker, Mic Timeout and Speaker Timeout. You can also perform a self test to test if the microphone and speaker are working correctly.

There are multiple audio inputs, user can define which audio mapping to which camera. “Audio1” is audio input from motherboard. Other audio inputs are from video capture cards. Audio out is from motherboard.



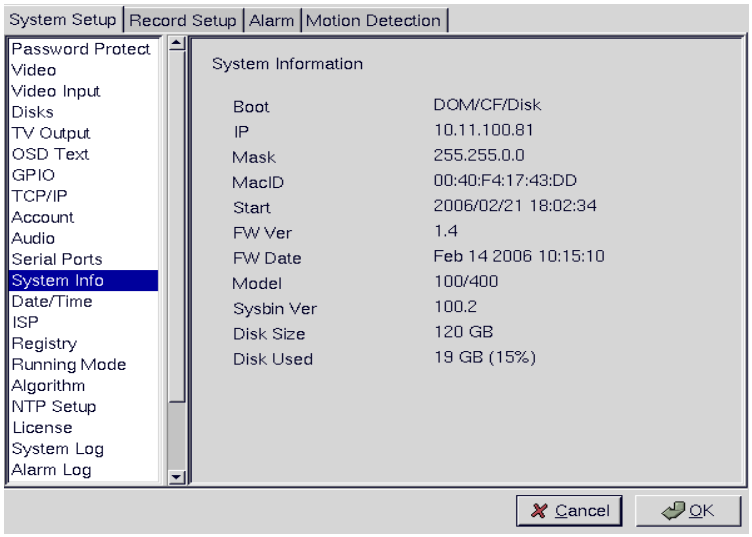
3.15.11 Serial ports

The RS232 serial ports (COM1 and COM2) are used to attach PTZ camera control cables, external modems, cash register or GPIO modules to the VPON DVR. Use the Serial Port menu to set parameters for the two serial ports.



3.15.12 System info

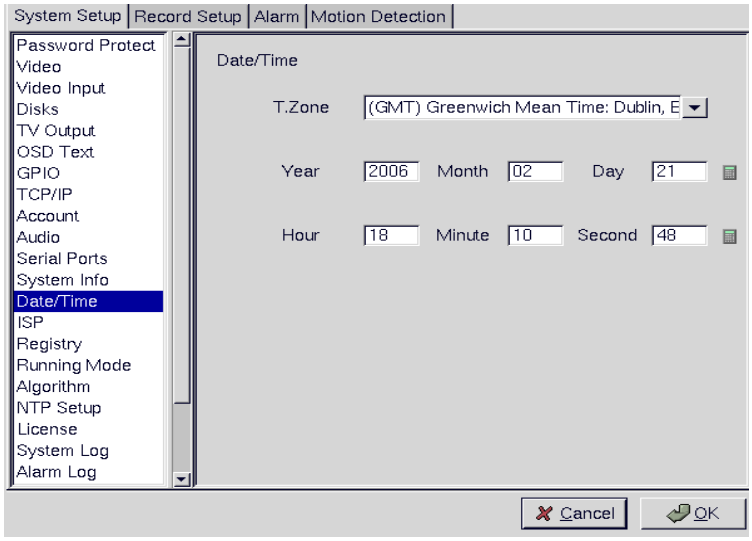
Use the System Info menu to display the system information such as disk parameters, TCP/IP properties, firmware information, and so on, on the screen.



There are no configurable fields on this page. Click OK or Cancel to leave the screen.

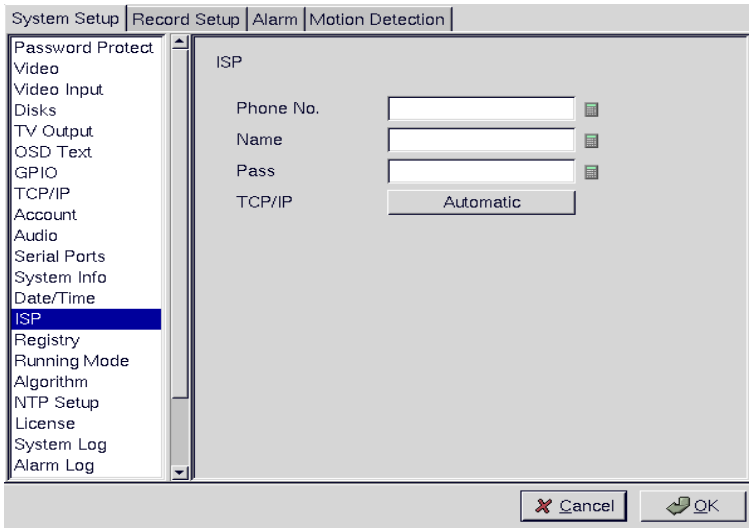
3.15.13 Date/Time

Use the Date/Time menu to set the precise time and date on the system. You can also set the local time zone in the T.Zone field.



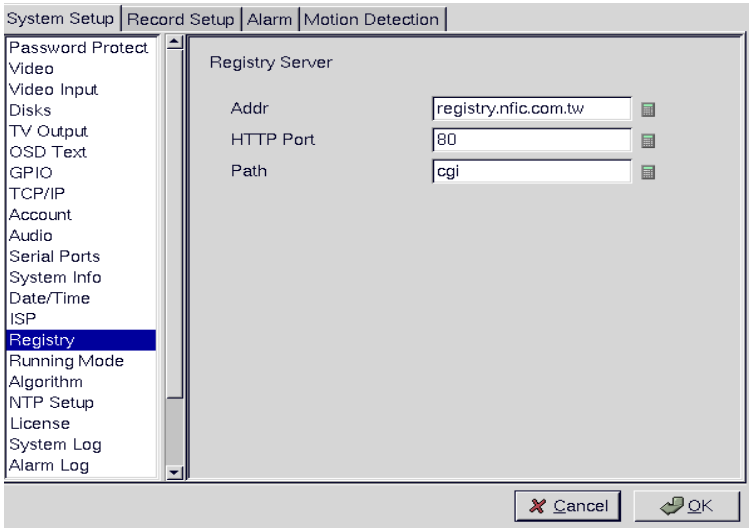
3.15.14 ISP

If you are using dial-up access to the Internet, use the ISP menu to enter details of your Internet Service Provider.



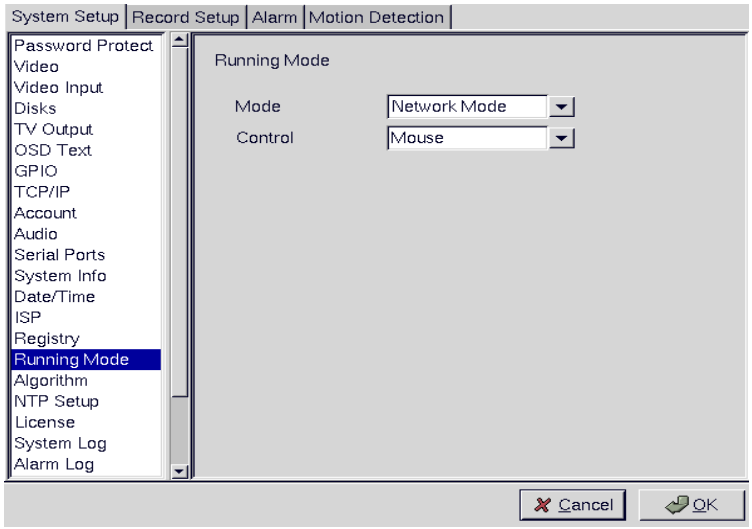
3.15.15 Registry

The Registry menu enables you to set up the registry server for your device. If you are using a dynamic IP address for the VP-100, you can set up the device to post its IP address to the VPON registry server. You can then look up your IP from the MAC address or server name.



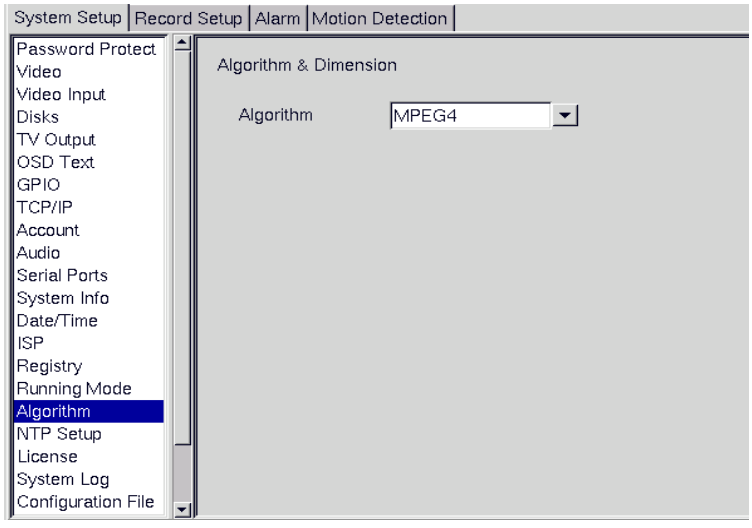
3.15.16 Running mode

Use the Running Mode menu to switch between Network Mode and ISP Mode, and between Mouse Mode and IR Remote Control Mode.



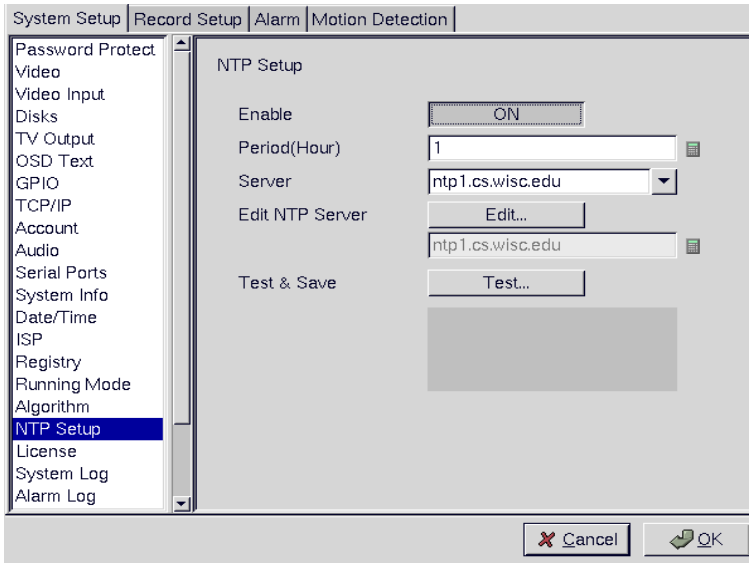
3.15.17 Algorithm

H.263: frame size is small and suitable for Network surveillance. MPEG4: Video quality good and frame size small. JPEG: Video quality best but frame size big.



3.15.18 NTP setup

Use the NTP Setup menu to enter details of the Network Time Protocol (NTP) server used to synchronize the time of the device with the network.

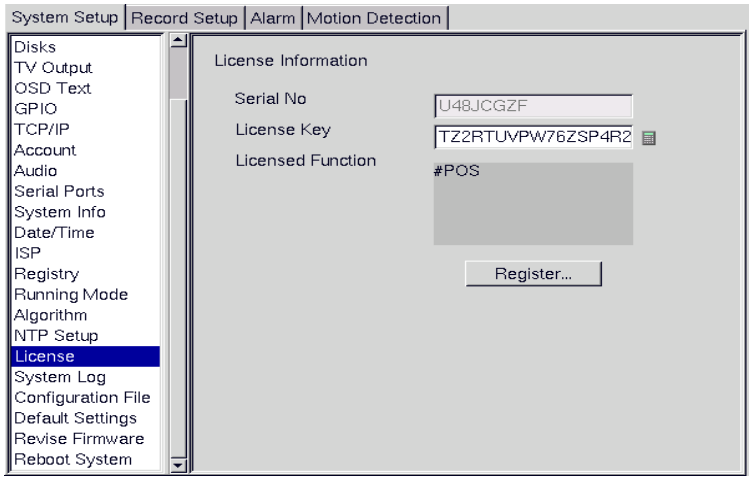


After making the changes, click on the Test & Save button to verify that the server is operational. Click **OK** to save changes.

3.15.19 License information:

1. There are two ways to grant POS license. One is key-in license key; the other one is plug-in a key-pro. So if you plug-in a key-pro you don't need to key in the license number again in the license setup menu.
2. There are three POS License to three levels:
   Level 1: Single POS unit – Can connect ONLY one cash register.
   Single POS only one cash register. This level pos function doesn't need to register.
   Level 2. 4 POS units -- Can connect maximum 4 cash registers.
   Level 3. Full functions – Can connect maximum 16 cash registers.
3. Click "system setup" button to display the System Setup menus and select the License section.

Note: The license in the following is an example only. Each DVR should have different license number. Please contact us for getting a license.



4. Key in your own license key.

Note: If you don't have a keyboard connected to the system, you can use the on-screen keyboard to enter your license key. Double-click the field to display the on-screen keyboard .Use the mouse to enter characters for the required field.

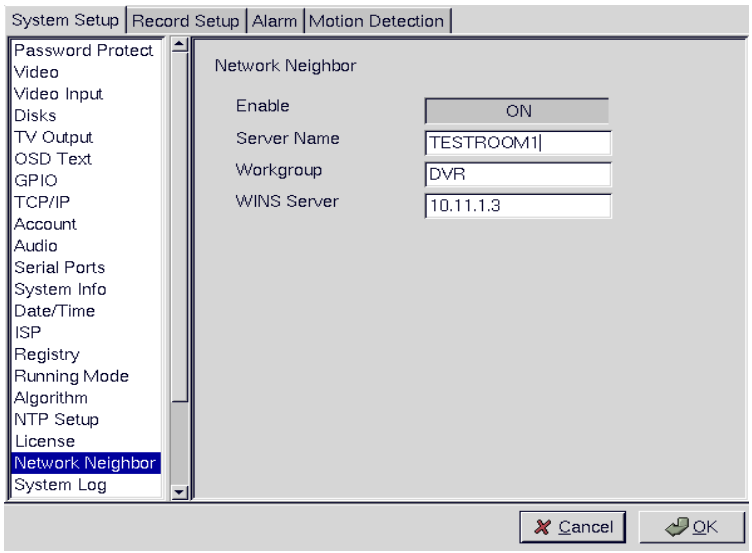
5. Click the Register button when you see the "**#POS**" , it mean register successful.
6. Back to the live display. Click POS button to display the POS Panel. You can try to send out some data from POS machine then POS text should show up with video.

3.15.20 Network Neighbor

User can copy the recorded files of VP-100 to other PC through network neighbor.

1. Enable the Network Neighbor function.
2. After define the server name, workgroup and WINS server, user can find out the DVR recording files from Microsoft windows network neighbor.

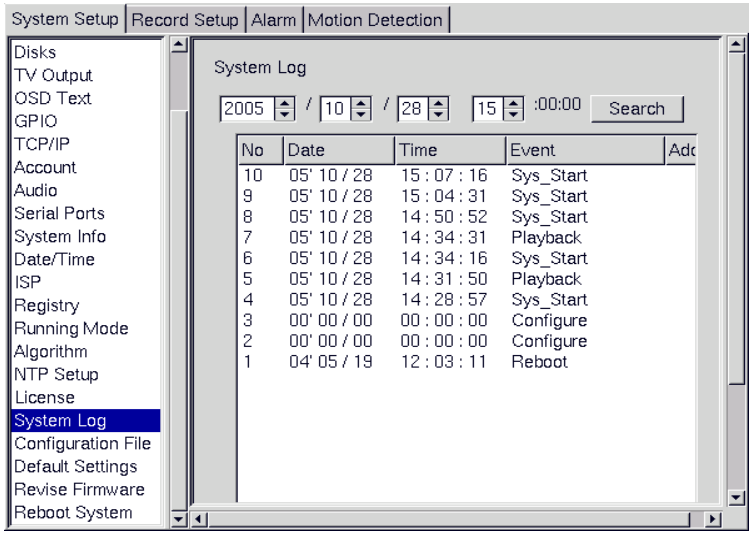
Note: when you setup server name and workgroup, please key-in English characters or numbers only.



3.15.21 System Log:

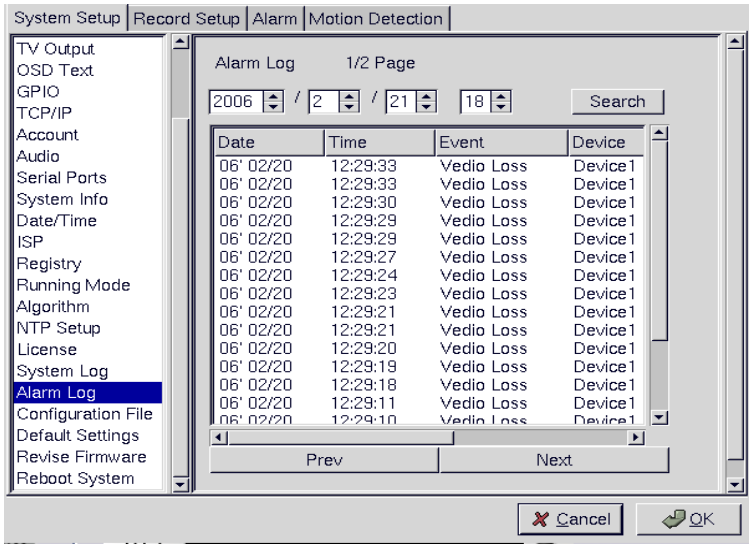
Any operation will be written into system log include local operation and remote operation. User can

search system log by specific time.



3.15.22 Alarm Log

Any alarm will be written into alarm log including motion trigger、GPIO trigger、Disk error、Video loss、POS event……etc. User can search alarm log by specific time.

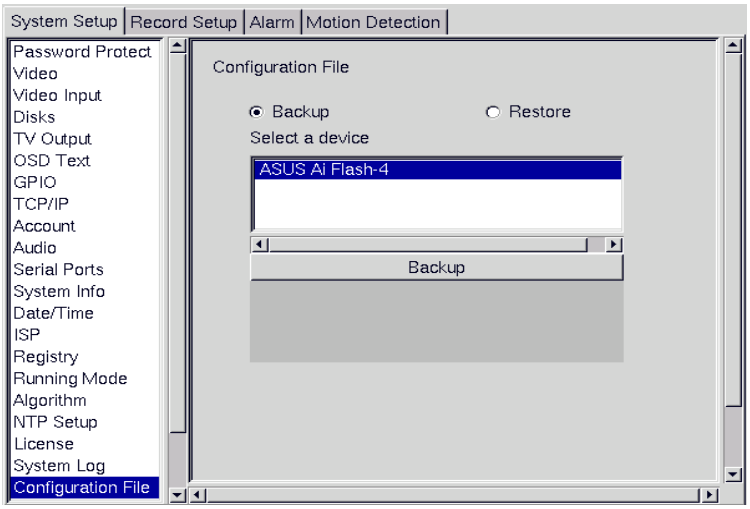


3.15.23 Export system configuration:

User can backup or restore system, record, alarm and motion detection setup data.

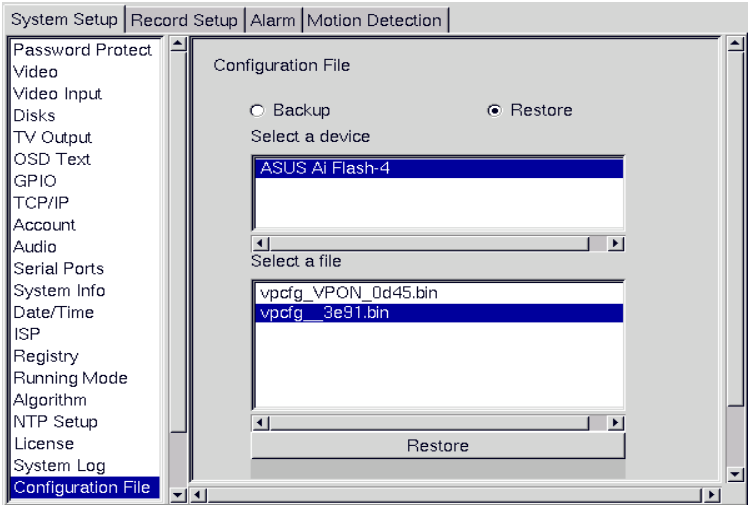
Backup configuration data:

1. Connect a USB flash to DVR for backup or restore configuration data. DVR will auto detect flash.
2. Select backup section and click a device, which is shown in the field.
3. Click **“Backup”** button to start to backup configuration data.
4. When user sees “**vpcfg _ your DVR name _ Mac ID.bin**” was saved in the field, it mean the backup was done.
5. Click **“ok”** button to leave system setup menu.



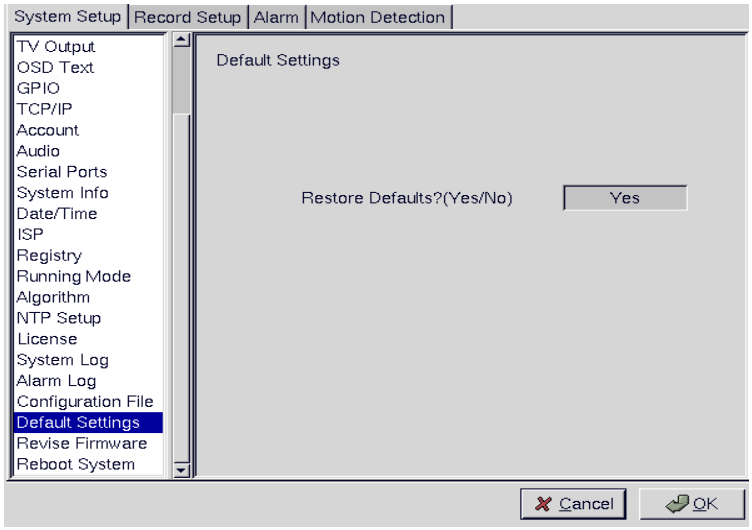
Restore configuration data:

1. Select restore section and click a device, which is shown in the field.
2. Select one "***.bin**" in the field
3. Click **"Restore"** button will pup-up a menu to ask you to over write data. Select "ok" to start to restore configuration data.
4. When restore data action was done, system will ask you to reboot DVR. Press "ok" to reboot DVR.
5. After restart DVR, user will get the configuration setup data back.



3.15.24 Default settings

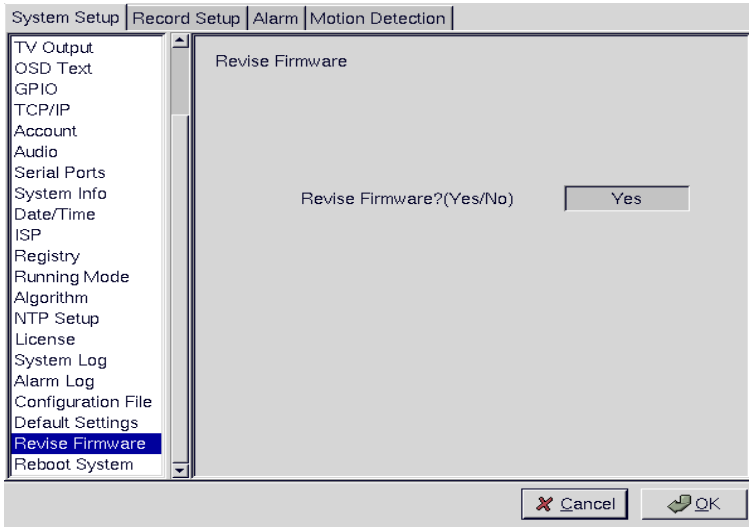
Use the Default Settings menu to reset all configurable parameters to their factory default settings.



Click Restore Defaults?(Yes/No) to restore defaults. Click Cancel or No to retain the current settings.

3.15.25 Revise firmware

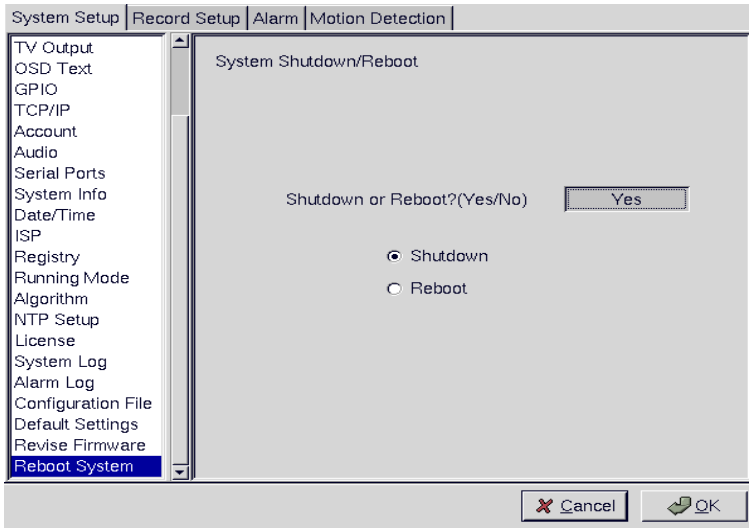
Use the Revise Firmware menu to upgrade the VP-100 firmware.



Click Revise Firmware?(Yes/No) to start the firmware upgrade process. Click Cancel or No to abort the attempt.

3.15.26 Reboot system

Use the Reboot System menu to reboot or shutdown the system.

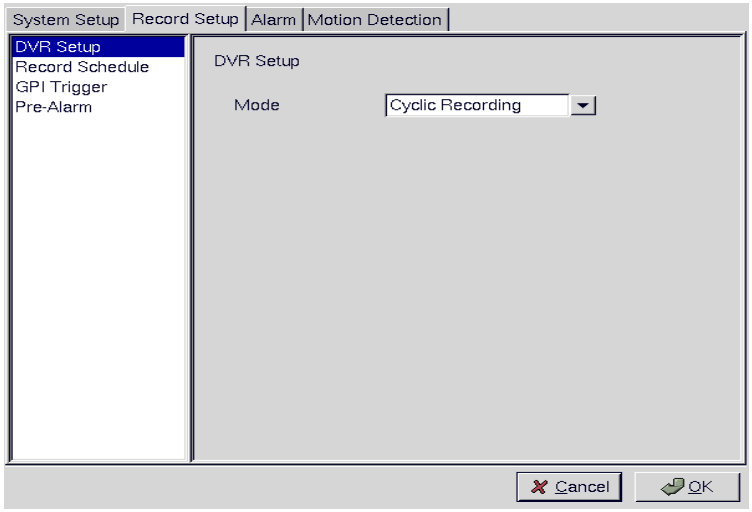


Use the keyboard or mouse (recommended) to select either Shutdown or Reboot. Click OK to perform the operation. Click Cancel or No to abandon.

[Record Setup]

3.16.1 DVR setup

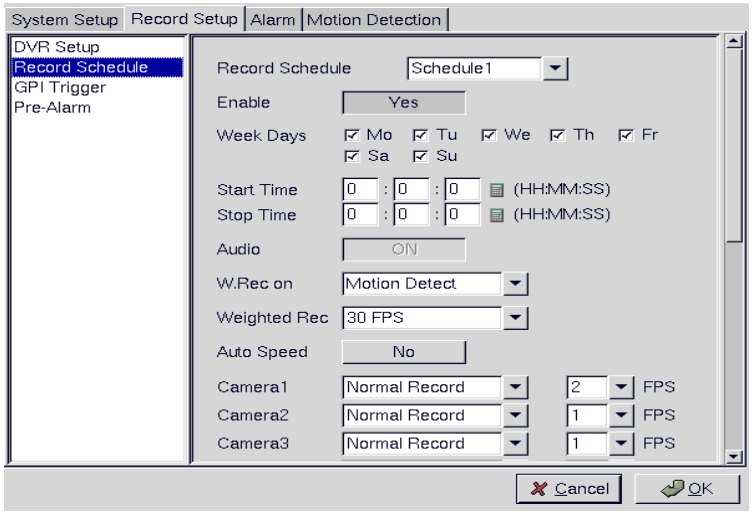
Use the DVR menu under the Record Setup tab to set the Digital Video Recorder parameters.



Select either Auto Stop or Cyclic Recording. Auto Stop recording stops when disk space runs out. Cyclic Recording continues to record until disk space runs out and then overwrites the oldest records. Click OK to save changes.

3.16.2 Record schedule

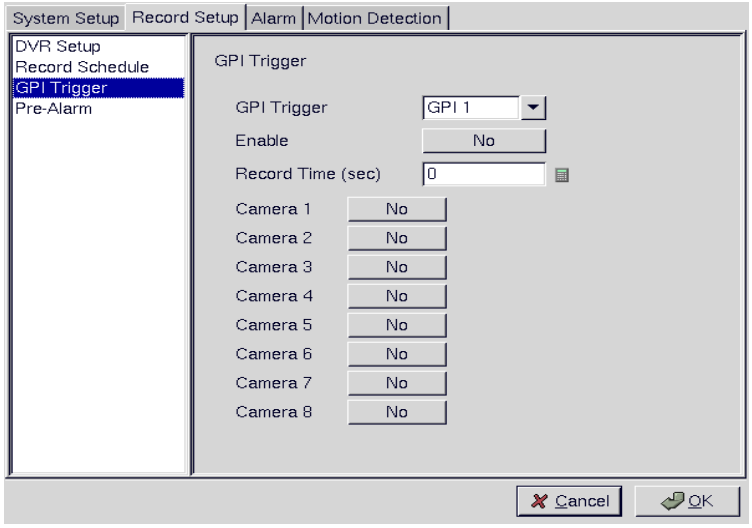
Use the Record Schedule menu under the Record Setup tab to set up automatic recording schedules for each camera and audio. You can set up to 16 record schedules that automatically record at given times and days even frame rate just remember to close auto speed setting. Weighted recording is for setting special recording frame rate when event triggers.



3.16.3 GPI Trigger

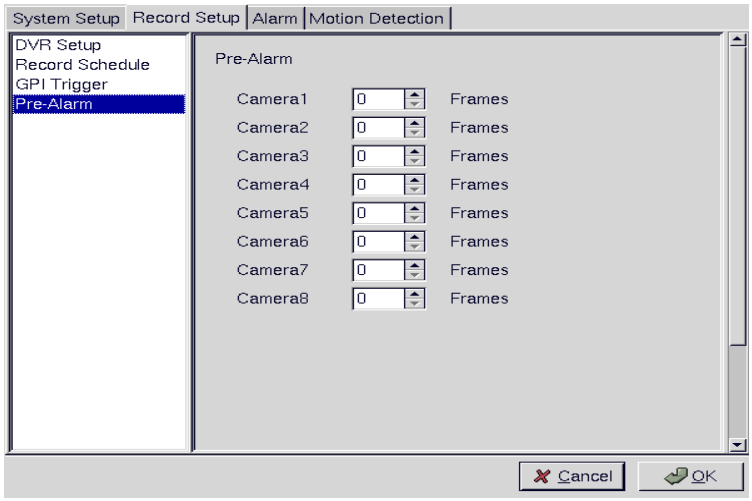
Use the GPI Trigger menu under the Record Setup tab to enable recording video from specified cameras when triggered by an external alarm(GPI) connected to the system. For instance, you may want to record

video from a camera installed at your front door when the door lock is opened. In this case, connected an alarm module (not provided) to lock and set the front door camera to start recording.



3.16.4 Pre-alarm recording

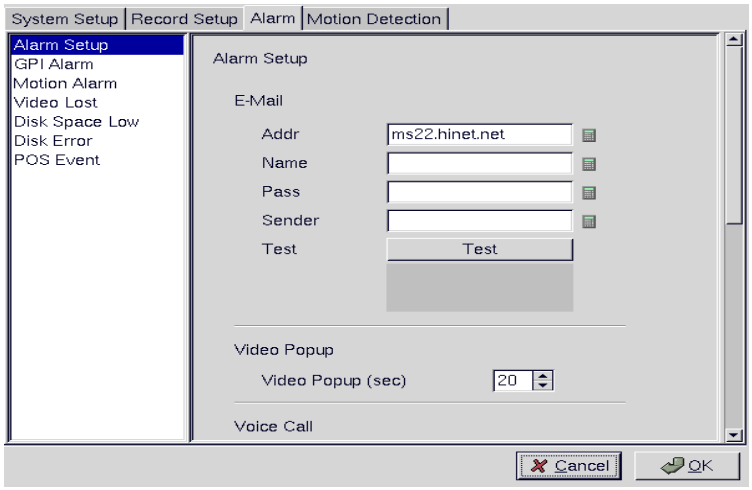
Use the pre-alarm menu under the record setup tab to determine how many frames are record before an alarm event occurs. Each camera can be set separately and you can record up to 300 frames.



[Alarm]

3.17.1 Alarm setup

Use the Alarm Setup menu under the Alarm tab to define what action is taken when an alarm is triggered. Through this menu, you can set up an E-mail address to which an E-mail is sent when the alarm is generated, or set up the device to display a video popup message on your monitor, or place a voice call.



The Voice Call options enable you to set up a voice modem that will make a call when the selected event (such as a GPI alarm, or video lost from a camera) occurs. Set the following options:

Redial -sets the number of times the voice modem will redial

Voice Repeat -sets the number of times the voice message is repeated on the voice call

Rec. Time -sets the time for which audio is recorded

Modem Speaker -sets the internal or external speaker to be used

Voice File -selects the voice file to be sent

Edit File Name -enables you to change the file name of the voice file

Use the keyboard or mouse (recommended) to complete all fields and click OK to save changes. Refer to the following sections to see how to select the voice call as the action for specific events such as GPI alarm and so on.

Note: The Voice Call options will be grayed out in the menu system if the voice modem function is not selected in the serial port setup menu. Make sure that a voice modem is enabled in device field in the Serial Ports menu item in order to place voice calls.

Voice call features

- A voice call message can be recorded using an internal or external microphone, and can be played back using an internal or external speaker.
- Up to 60 voice messages can be recorded and stored on the VP-100 and used for different alarm events.
- Messages recorded for the voice call function must be between 5 and 10 seconds.

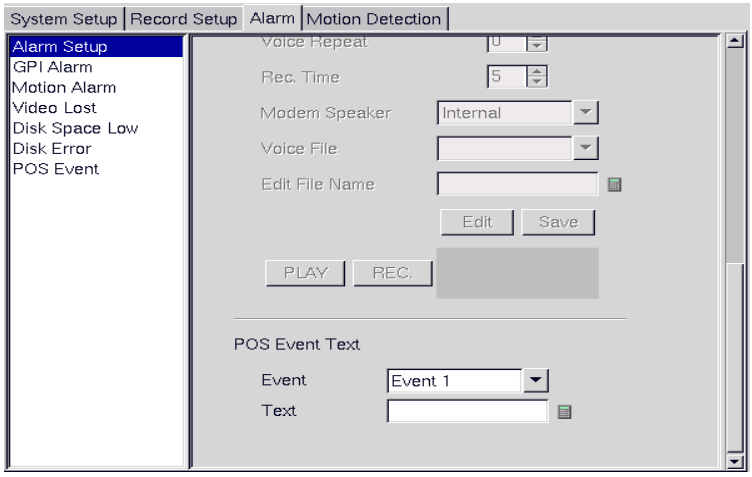
Known issues with the voice call function

- There will be three seconds silence between a voice call being answered and the start of the message.
- If the voice call function calls a phone with an automatic answering machine, the VP-100 will behave as if the phone has been answered.
- The VP-100 does not support non-standard ringing tones. If the VP-100 calls a phone and an unexpected tone is received, an error message will be generated.

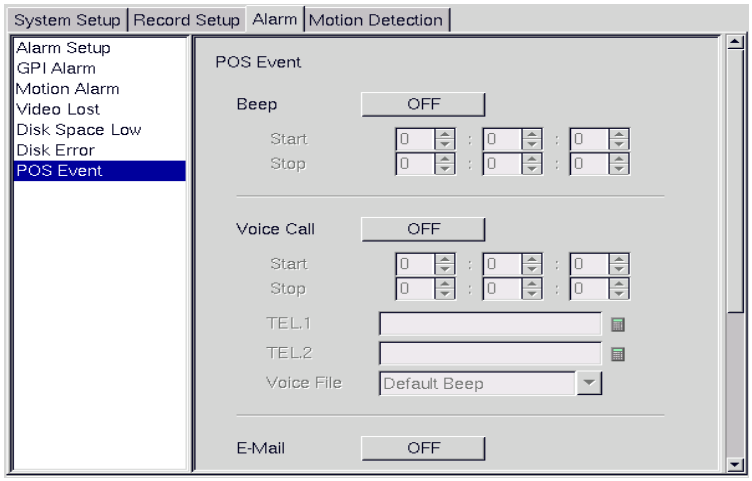
POS event:

User can specify any keyword in the transaction data For Data Event Alerting. Such as VOID and NO SALE

1. Click Setup button on the screen and select Alarm then enter Alarm setup function.



2. You can define events by numeric characters such as selling prices or abnormal text such as “VOID” or “NO SALE”.
3. You can enter at most 20 POS events. Once the captured POS data contains one of the defined POS events, VPON triggers actions for the event. For example, you can enter VOID and NO SALE in the POS Event respectively.
4. Select the POS Event function and start to set up reaction when receiving the text data from POS machine.
5. You can define how the VPON DVR reacts when receiving the text data from POS machine.

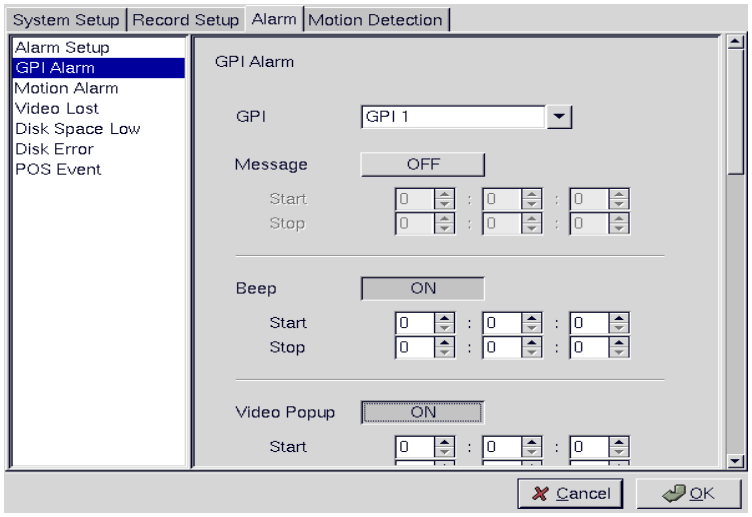


6. **Beep**- beeps when the event was occurred.
7. **E-mail**- sends e-mail to the specified address when the event was occurred.
8. **Voice call**- dial a voice call to the specified number when the event was occurred
9. Back to the live video after setting alarm. You can try to cancel a transaction from the POS machine and VPON DVR should alerts.

Note: The text was captured from the POS machine; you should check what text will be sent from the POS machine, then set appropriate text in POS Event.

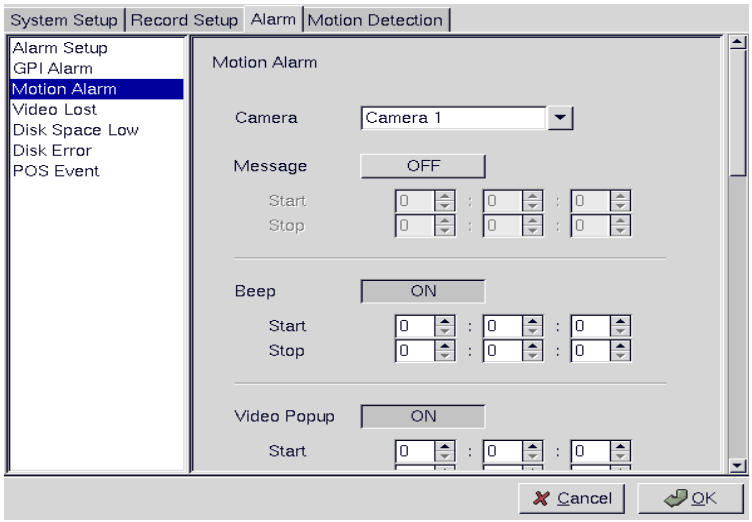
3.17.2 GPI alarm

Use the GPI Alarm menu under the Alarm tab to set what actions are taken when a GPI alarm is generated. You can set up the alarm through a message, a beep, a video popup, or E-mail.



3.17.3 Motion Alarm

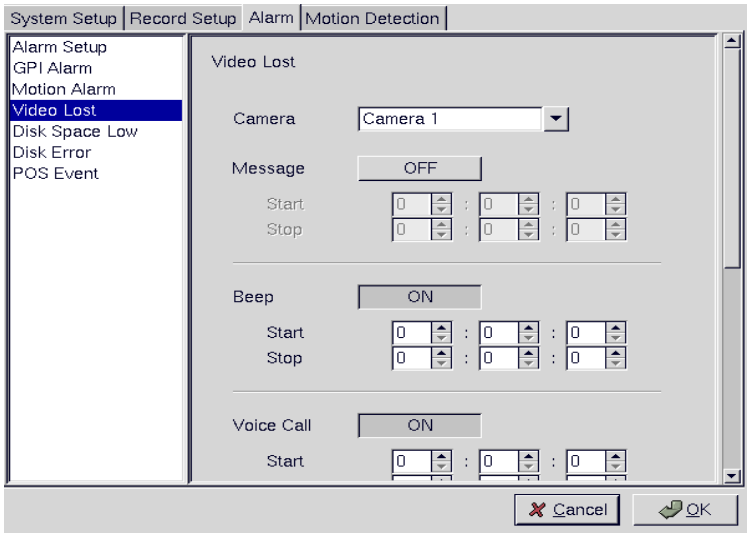
Use the Motion Alarm menu under the Alarm tab to set what actions are taken when a motion detection alarm is generated. You can set up the alarm through a message, a beep, a video popup, a voice call, or E-mail.



Use the keyboard or mouse (recommended) to select the required GPI from the GPI drop-down box and complete all fields. For each action, you can specify the time interval over which the GPI is monitored for an alarm to be generated. For the Voice Call option, specify two telephone numbers where the call may be placed along with the voice file. For the E-mail option, specify the recipient, subject, and text of the E-mail along with which of the cameras.” status” is sent in the E-mail and the start and stop times. Click OK to save changes.

3.17.4 Video lost

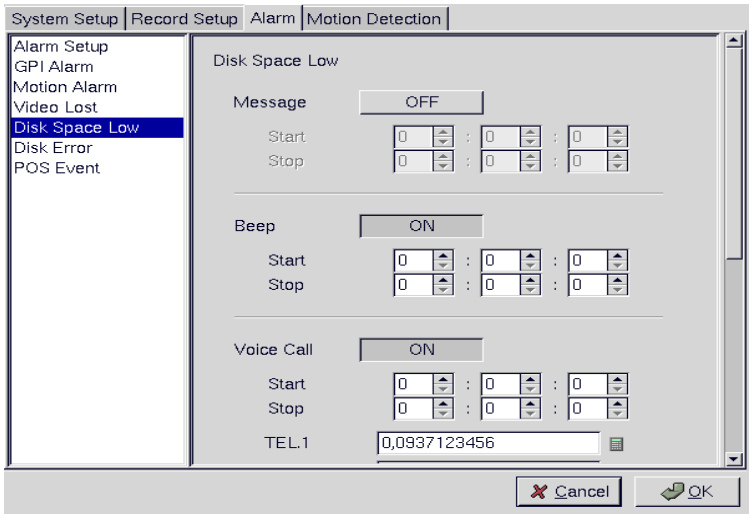
Use the Video Lost menu under the Alarm tab to set what actions are taken when video signal from a camera is not available. You can set up the alarm through a message, a beep, a video popup, a voice call, or E-mail.



Use the keyboard or mouse (recommended) to select the required camera for video lost from the Camera drop-down box and complete all fields as described in GPI alarm. Click OK to save changes.

3.17.5 Disk space low

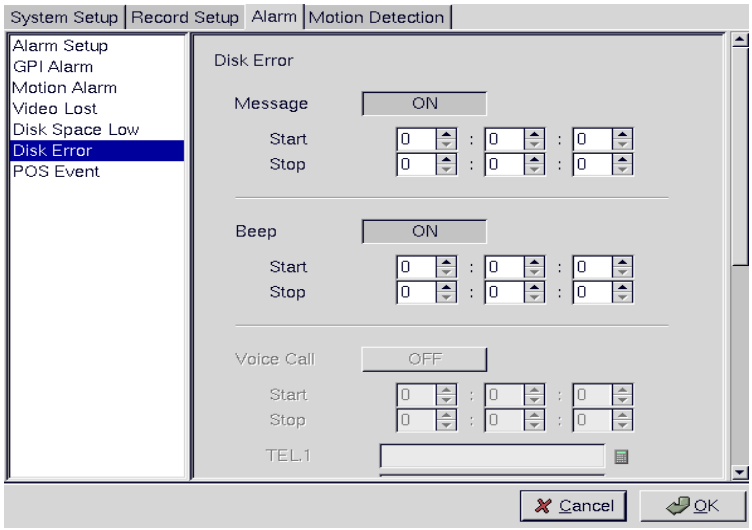
Use the Disk Space Low menu under the Alarm tab to set what actions are taken when the disk space is insufficient to record data. This alarm is generated only when the DVR mode is set to Auto Stop. You can set up the alarm through a message, beep, voice call, video popup, or E-mail.



Use the keyboard or mouse (recommended) to complete all fields as described in GPI alarm. Click OK to save changes.

3.17.6 Disk error

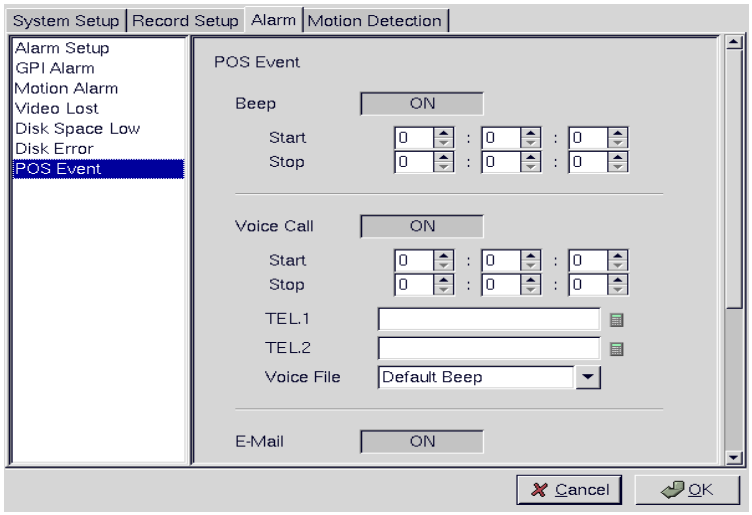
Use the Disk Error menu under the Alarm tab to set what actions are taken when there is an error while accessing the disk. You can set up the alarm through a message, a beep, a video popup, or E-mail.



Use the keyboard or mouse (recommended) to complete all fields as described in GPI alarm. Click OK to save changes.

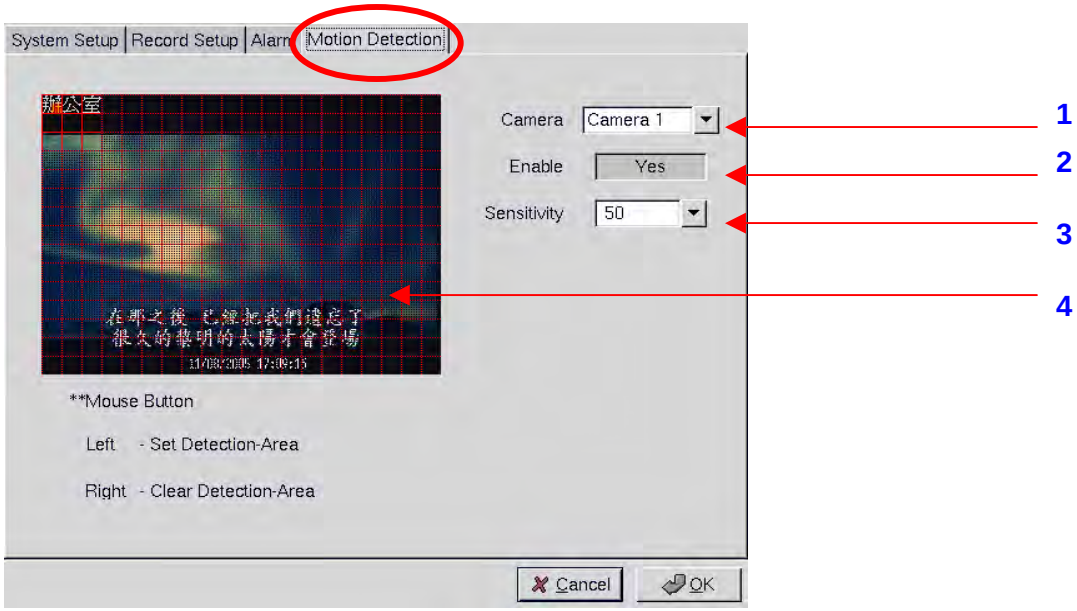
3.17.7 POS event

Select the POS event function and start to sep up reaction when receiving the text data from POS machine. You can set up the alarm through a beep, a voice call, or E-mail.



3.18 Motion Detection

Use the Motion Detection page to set motion detection parameters for each camera.



Motion Detection Setup Procedure :

1. Camera: Select the camera for setting motion detection.
2. Enable (Yes/No): Turn On/Off the motion detection.
3. Sensitivity: Select motion sensitivity level .
4. Directly drag the square on the screen to a desired & location for Motion Detection.

Each small square on the displayed grid can be set to detect motion. Use the left mouse button to make a square sensitive to motion. Use the right mouse button to make it insensitive. Click **OK** to save changes.

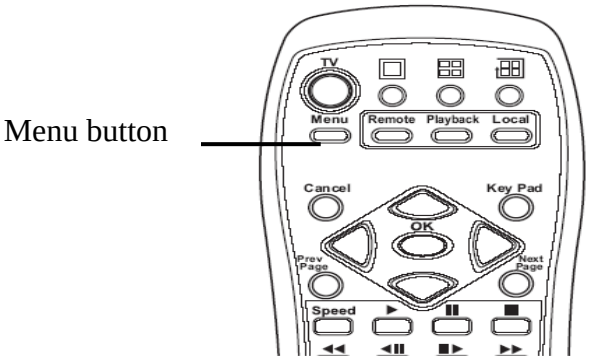
4. IR Remote Control Operation

4.1 Introduction

This chapter covers remote control operation using IR remote controller. The VP-100 must be in IR remote control running mode for this operation.

4.2 Main menu

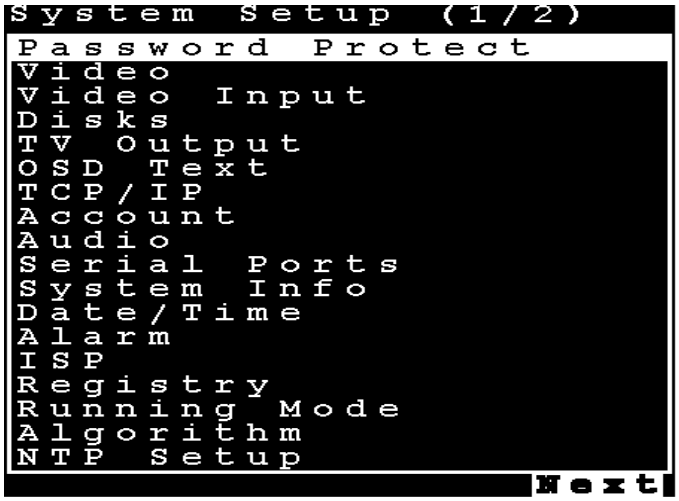
Press the **Menu** button on the remote control to display the main menu on screen.



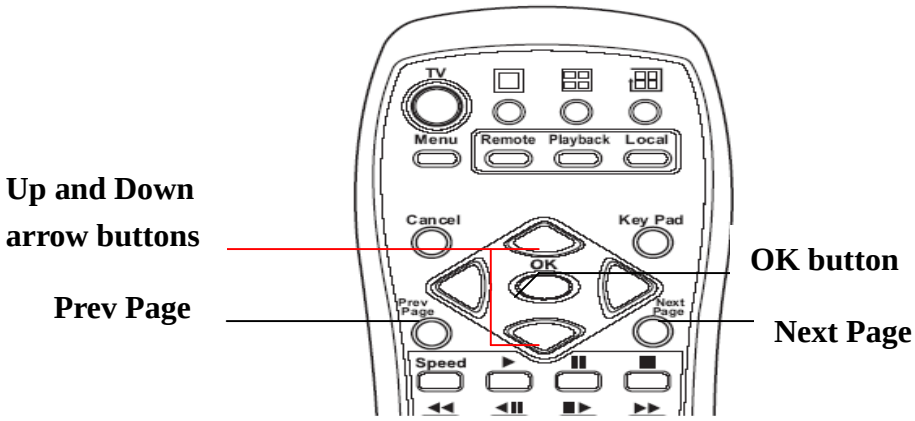
Use the **Up** and **Down** arrow buttons to select one of the four options and press **OK** button to confirm your choice.

4.3 System setup

The **System Setup** menu enables you to change many different parameters of the VP-100. This section describes each option in the **System Setup** menu.



Use the **Up** and **Down** arrow buttons to highlight an option, and use the **OK** button to confirm your choice. You can move between pages using the **Prev** Page and **Next Page** buttons on the remote control.



4.3.1 Password protect

Use the **Password Protect** option to enable password protection, set administrator and user passwords, set the auto lock period and lock the system immediately. Enabling password protection prevents unwanted users from accessing or configuring the VP-100. The **Password Protect** menu has the following choices:

Enable - enables password protection.

Admin Pass - sets the admin password.

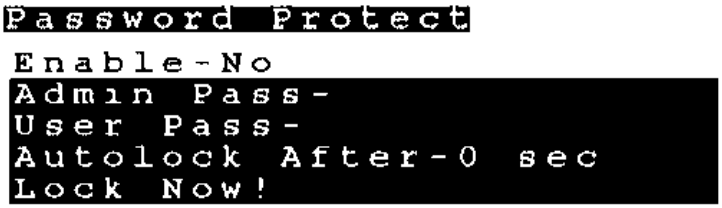
User Pass - sets the user password.

Auto lock After - enables password protection after the specified time interval.

Lock Now! - enables password protection immediately.

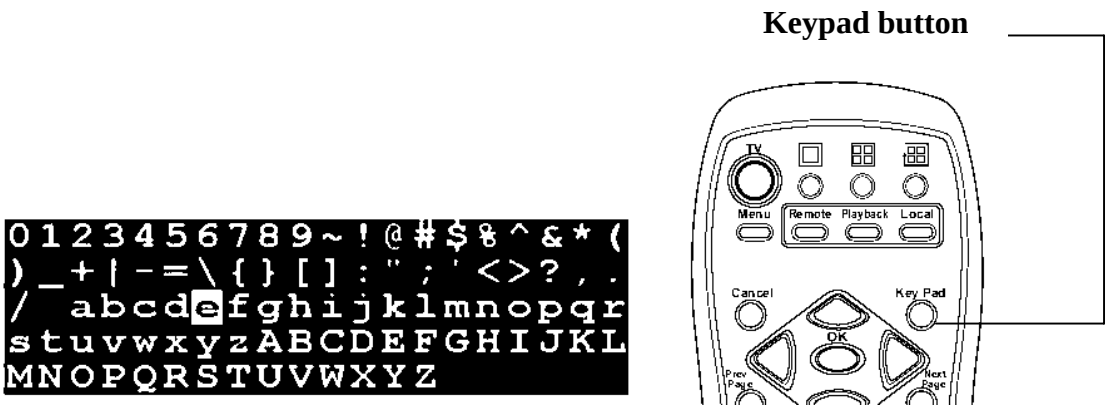
To set the user or admin password:

1. Use the **Up** and **Down arrow** buttons on the remote control to highlight the **Admin Pass** option to set the administrator password or the **User Pass** option to set the user password.



2. Press the **Right** arrow button to display the password entry screen.

3. Press the **keypad** button on the remote control to display the on-screen keyboard.



4. Use the **Arrow** buttons on the remote control to choose a letter and use the **OK** button to confirm you choice.
5. When the new password has been entered correctly, press the **keypad** button on the remote control to turn off the on-screen keyboard.
6. Press the **OK** button to confirm the new password.

When user or admin passwords are set and enabled, you will be prompted for a password before going on further functions. Use the on-screen keyboard to set user or admin passwords as described.

To set the password protects function:

1. Select the **Enable** option from the **Password Protect** menu.
2. Use the **Left** and **Right** arrow buttons to toggle between **Yes** and **No.**
3. Press the **OK** button to confirm your choice.

The autolock function in the Password Protect menu will lock the system after the specified period of inactivity.

To set the period of inactivity before the system is locked:

1. Highlight the autolock option in the **Password Protect** menu.
2. Use the **Left** and **Right** arrow buttons to increase or decrease the period of inactivity.
3. Press the **OK** button to confirm your choice.

To lock the system immediately:

1. Highlight the **Lock Now!** Function in the **Password Protect** menu.
2. Use the **Left** or **Right** arrow buttons to confirm the operation.

4.3.2 Video

Use the **Video** menu to set all the video parameters for the cameras connected to the VP-100. There is one video screen for each camera with the following parameters:

Standard - sets the video signal format. Choose NTSC in the US, or PAL in Europe and most Asian countries. If you are not sure about this option, select Auto. VP-100 will detect the video standard automatically.

Brightness- adjusts the amount of light or brightness for the selected camera according to your preference.

Contrast - adjusts the difference between light and dark areas or contrast for the selected camera according to your preference.

Saturation - adjusts the amount of color for the selected camera.

Hue - adjusts the dominant color for the selected camera.

Quality (All) - adjusts the video quality for all cameras. The default setting is 80. We recommend that you do not set this value to 100 to avoid slow video transmission and using up hard disk space easily.

Compression Boost- enable you to compress the video signal to save disk space and thus extend recording time. It is recommended to keep this setting to None. The higher the compression boost, the

lower the video data rate. We recommend you use the H.263 or MPEG4 algorithm for low data rate applications..

Auto Gain Control-enables automatic gain control to adjust the video signal strength.

Mirror Horizontal – flips the video signal from the selected camera along the horizontal axis.

Mirror Vertical – flips the video signal from the selected camera along the vertical axis.

Max Connection - limits the maximum number of connections allowed to access the VP-100 over the Internet. Set to zero to allow the maximum number of connections.

Max Bandwidth - sets the maximum bandwidth in bytes/second that can be used by users connecting to the VP-100 over the Internet.

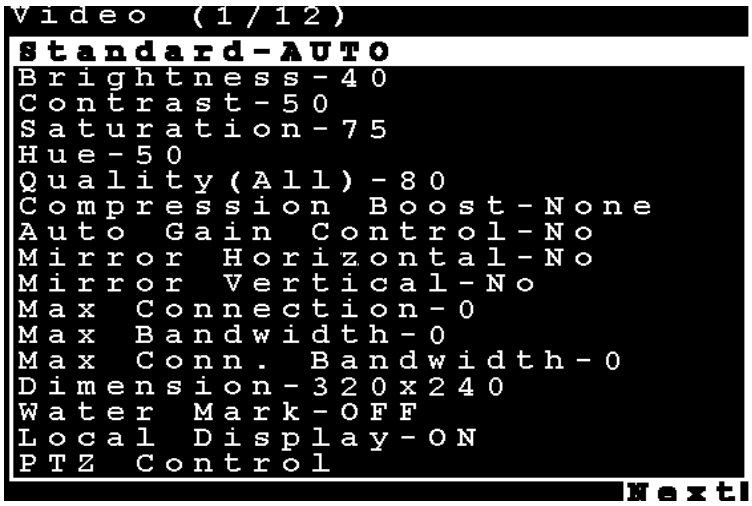
Max Conn. Bandwidth - sets the maximum bandwidth allocated for each connection to the VP-100. This is the maximum bandwidth divided by the maximum connections.

Dimension- sets 320x240 or 640x480 resolution for each camera.

Water Mark-Sets water mark on the video image.

Local Display- enables viewing the selected camera video signal on the local display. If this option is set to Off, the camera is still optional and its video can be recorded if needed.

PTZ Device- Chose one PTZ from our support list. If user can't find out PTZ camera, please contact us.



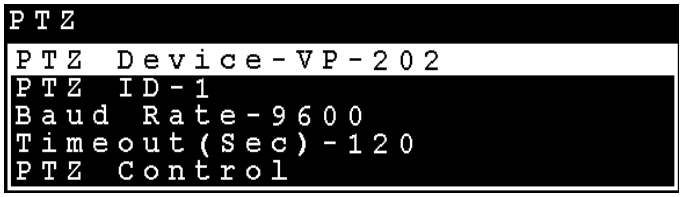
To change the video parameters:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the option.
2. Use the **Left** and **Right** arrow buttons to change the value assigned to the setting.
3. Press the **OK** button to confirm the new settings.

Each camera has its own video screen. To move between the screens for each camera, use the **Prev** Page and **Next** Page buttons on the remote control.

PTZ Control

Select the type of PTZ cameras used and set each camera that has one connected to Yes. The timeout value represents the time given to the cameras to respond to a command. Don't forget to setup PTZ ID.



To set the timeout value for PTZ cameras connected to the VP-100:

1. Use the **Up** and **Down** arrow buttons to highlight the **Timeout** field.
2. Use the **Right** arrow key to increase the value and the **Left** arrow key to decrease the value.
3. Press the **OK** button to confirm the new value.

You can set and recall up to 6 preset configurations for each camera using the following buttons in the PTZ control section:

Preset - save the current pan, tilt, zoom, and focus settings in one of 6 preset configurations.

Recall - recall the selected preset configuration.

ZOOM - adjust the zoom to provide a more closer or wider view of the subject.

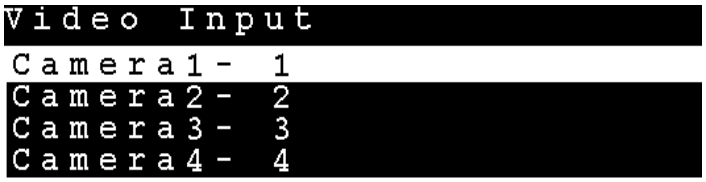
FOCUS - adjust the focus of the camera.

Speed - Adjust the speed of the selected PTZ camera.

Pan and tilt - Adjust the pan and tilt of the selected camera.

4.3.3 Video input

This function is to map physical camera video inputs on VP-100 cards to the video positions on local display. Normally, video input#1 is map to position #1. But you actually can set video inputs to any position from #1 - #16, (depends on how many VP-100 cards you install) on the screen as long as there is vacancy.

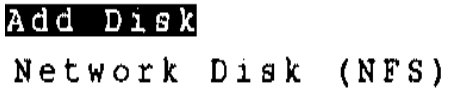


4.3.4 Disks

Use the **Disks** menu to add and remove network disks from the system. Network disks can be used to provide more storage space for long time recording .

To add a network disk:

1. Highlight the disk you want to add and press the **OK** button.
2. When the **Add Disk** screen is displayed, press the **OK** button.



The Add Network Disk menu is displayed, enabling you to set the IP address and volume size of the disk, test its validity, and save the disk parameters.

To enter an IP address:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **IP/Addr** option and press the **Right** arrow button to confirm the choice.
2. Enter an IP address using the number buttons on the remote control.

Note: You cannot enter a period (dot) between the fields in the IP address using the remote control keypad. Use the on-screen keypad to enter the dots.

3. Press the **OK** button to confirm the new address.

To enter a volume name for the new disk:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Volume** option and press the **Right** arrow button to confirm the choice.
2. Use the on-screen keyboard to enter a volume label for the new disk.

To test a network disk:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the Test! option.
2. Press the **OK** button to confirm the choice.

The test result will appear on the screen.

To save disk parameters:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Save!** option.
2. Press the **OK** button to confirm the choice.

4.3.5 TV output

The VP-100 can be connected to a VGA monitor or a TV to view the camera video signal. Use the **TV Output** menu to set the following parameters for the video output port:

Device - sets the output to VGA or TV.

Standard - sets the signal format for the output device. Select from NTSC, PAL, SECAM, and so on.

Output to - sets the video output to the composite or S-Video signal.

Delay - sets the delay between consecutive camera signals when displaying all the camera signals automatically.

Camera (From) - specifies the first camera signal displayed in the automatic cyclic camera mode.

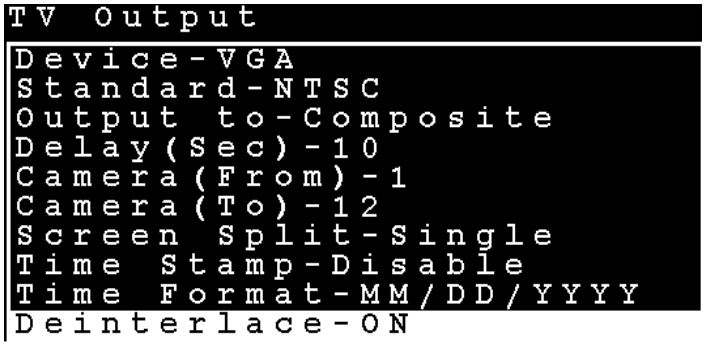
Camera (To) - specifies the last camera signal displayed in the automatic cyclic camera mode.

Screen Split - sets the number (1, 4, 9, or 16) of cameras to be shown on the local screen.

Time Stamp - Enables and specifies the position of the time stamp on the screen.

Time Format - Specifies the format of the time stamp.

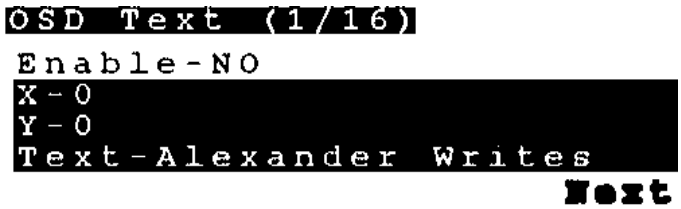
Deinterlace - Software –> based De-interlace support.



Use the **Up** and **Down** arrow buttons on the remote control to select any one of the displayed parameters and use the **Left** and **Right** buttons to cycle through the available options. Press the **OK** button when parameters are set correctly.

4.3.6 OSD text

A line of text can be displayed with the video from each camera connected to the VP-100. Use the **OSD Text** menu to enable the text and alter it. You can also set the position of the text using the X and Y parameter values. Increasing the value of Y moves the text down the screen. Increasing the value of X moves the text to the right.

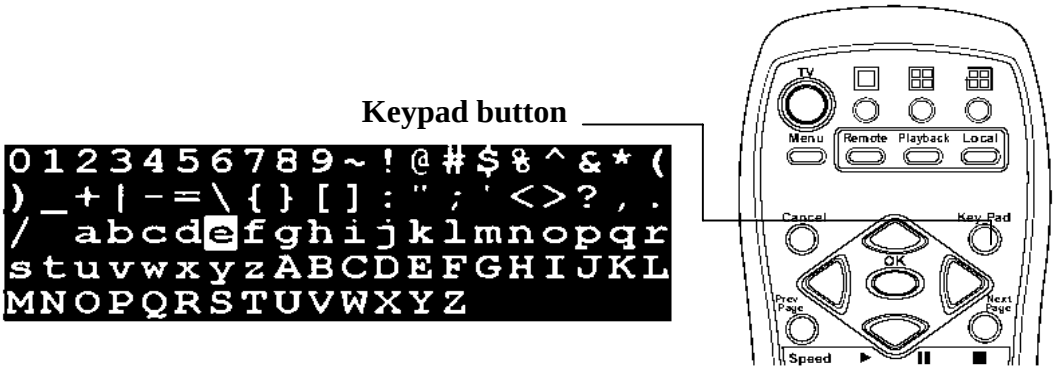


To alter the text position:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight **X** or **Y.**
2. Use the **Right** button to increase the value and the **Left** button to decrease the value.
3. Press the **OK** button when the value is correct.

Use the on-screen keyboard to alter the OSD text as follows:

1. Use the **Up** and **Down** arrow buttons on the remote control to highlight the **Text** option.
2. Use the **Right** arrow button to confirm.
3. Press the **keypad** button on the remote control to display the on-screen keyboard.



4. Use the **Arrow** buttons to highlight the letters you need for your text and press the **OK** button to

choose them.

5. When your text is complete, press the **Keypad** button to remove the on-screen keyboard.
6. Press the **OK** button to save the new text.

4.3.7 TCP/IP

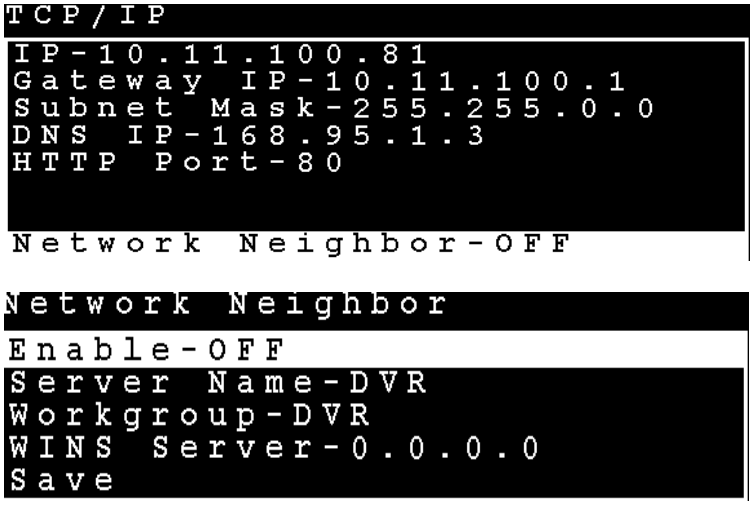
Use the **TCP/IP** menu to set the IP address of the VP-100, the gateway, the subnet mask, the DNS server IP address, and the HTTP port. If you want to use the VP-100 on your network, see your network administrator to obtain a valid IP address for the VP-100.

Network Neighbor function: User can see VP-100 recording directory from other PC through Microsoft Windows network neighbor. Then user can copy files in that directory to PC or do remote back up automatically, if user has the proper software installed on the PC.

Note: when you setup server name and workgroup, please key-in English characters or numbers only.

To change the TCP/IP parameters:

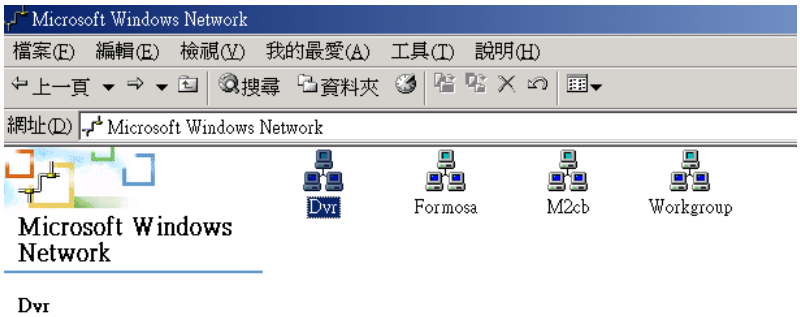
1. Select the field to change using the **Up** and **Down** arrow buttons.



2. Press the **Right** arrow button to confirm.
3. Use the number pad on the remote control to enter a new value
4. Press the **OK** button to confirm the new value.

Network Neighbor function:

After define the server name, workgroup and WINS server, user can find out the DVR recording files from Microsoft windows network neighbor. See as following picture.



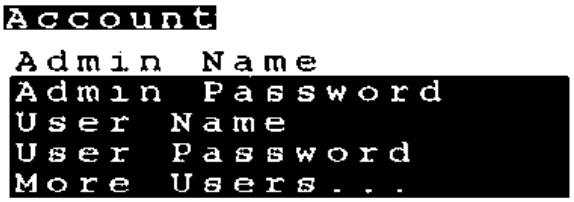
4.3.8 Account

Use the **Account** menu to set up an administrator name and password as well as user name and passwords. The default administrator name is **Webmonitor** and the default password is **OYO**. You can also use this menu to set up to 16 additional users, their passwords and their permissions on the system.

Note: It is important that you set up a user name and password. The user is different from the administrator and has access to only the video. Use the **More Users** function to alter the authorities of users who access the VP-100 from the Internet.

To set an Admin/User name or password:

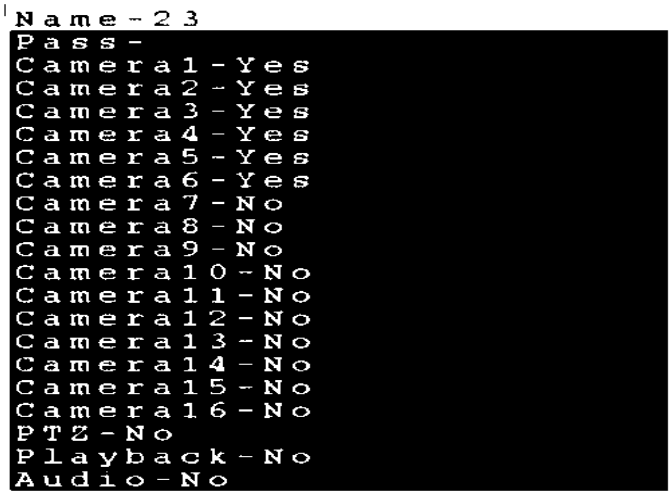
1. Use the **Up** and **Down** arrow buttons to select the field to change.



2. Press the **Right** arrow button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select the letters you require and the **OK** button to confirm.
5. When the field is correct, press the **Key Pad** button to turn off the on-screen keyboard.
6. Press the **OK** button to confirm.

To set up additional users and their permission rights:

1. Use the **Up** and **Down** arrow buttons to select the **More Users** choice.



2. Press the **Right** arrow button to confirm.
3. Use the **Arrow** buttons to select the **Name** and **Pass** options and modify these fields in the same manner as in the previous procedure.
4. Use the **Up** and **Down** buttons to select any cameras from **Camera1** through **Camera16.**
5. Press the **Right** arrow to select **Yes** to allow the user to access and control the selected camera.
6. Use the **Up** and **Down** buttons to select the **PTZ** option.
7. Press the **Right** arrow button to select **Yes** to enable PTZ control of the selected cameras for the user.
8. Use the **Up** and **Down** buttons to select the **Playback** option.

9. Press the **Right** arrow button to select **Yes** to enable the user to record and play back the signal from the selected cameras.
10. Use the **Up** and **Down** buttons to select the **Audio** option.

Note: Audio can be disabled for live viewing and playback of recordings using the Audio Disable function.

11. Press the **Right** arrow button to select **Yes** to enable the user to hear the live audio from the selected cameras.

4.3.9 Audio

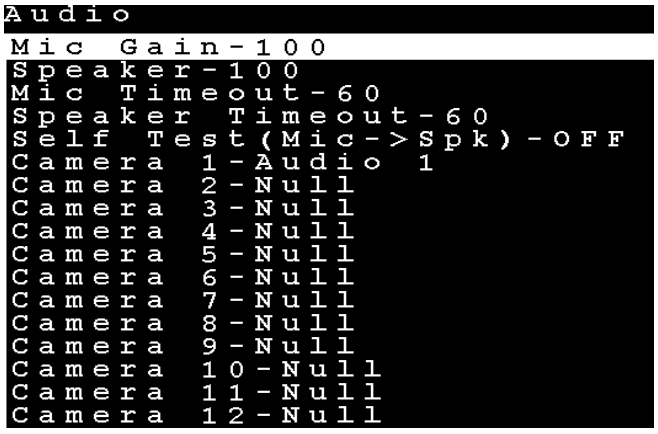
Use the **Audio** menu to set up the audio parameters for the VP-100. The configurable parameters areas follow:

• **Mic Gain** – adjusts the gain of the microphone.
• **Speaker** – adjusts the speaker output level (volume).
• **Mic Timeout** – sets the timeout for the microphone.
• **Speaker Timeout** – sets the timeout for the speakers.
• **Self Test (Mic -> Spk)** – performs a self-test to ensure correct operation of the microphone and speaker.
• **Camera -** setup which camera mapping to which audio channels. Audio1 is the audio input from motherboard. The other audio inputs are from video capture card.

Note: Make sure that audio is enabled when recording signals from the cameras attached to the VP-100.

To set the audio parameters:

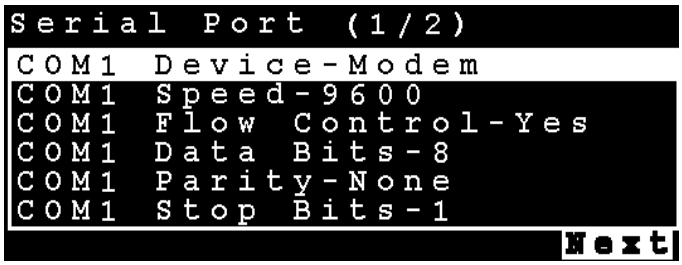
1. Use the **Up** and **Down** arrow buttons to select a field to change.



2. Use the **Right** arrow button to increase the value and the **Left** arrow button to decrease the value.
3. Press the **OK** button to confirm.
4. Use the **Up** and **Down** arrow buttons to select the **Self Test (Mic -> Spk)** option.
5. Press the **Right** arrow button to set the option to on to make sure that the microphone and speaker is working correctly.

4.3.10 Serial ports

The VP-100 can be connected to other serial devices such as external modems, GPIO (General Purpose Inputs and Outputs), Voice Call devices, PTZ cameras, camera control devices, text input devices, or USB serial ports, using two serial ports - **COM1** and **COM2**. The RS232 standard is used for these ports. Use the **Serial Ports** menu to set the following parameters:



COM1 Device - selects the type the serial device. You can select external modems, GPIO, voice call modems, etc.

COM1 Speed - sets the speed (1200 to 115200 bps) for the serial device.

COM1 Flow Control - enables or disables the flow control for the device.

COM1 Data Bits - Sets the number of data bits (6, 7, or 8) for the device.

COM1 Parity - Sets odd or even parity.

COM1 Stop Bits - Sets 1 or 2 stop bits for the device.

To change the serial port parameters:

1. Use the **Up** and **Down** buttons to select the field to change.
2. Use the **Left** and **Right** arrow buttons to cycle through the available options for that field.
3. Press the **OK** button when the field is set correctly.

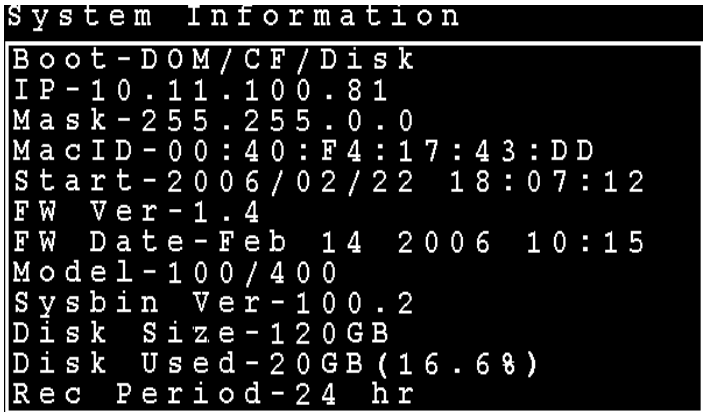
Note:

1. You can use the **Prev Page** and **Next Page** buttons on the remote control to toggle between the **COM1** menu and **COM2** menu.

2. When an optional GPIO module is connected to the serial port, the VP-100 detects it automatically and provides GPIO options in the system menu.

4.3.11 System information

Use the **System Information** option to display the System Information screen and view information about the boot disk, TCP/IP parameters, the MAC ID of the device, firmware version and date of installation, model number, and hard disk properties.



4.3.12 Date/Time

Use the **Date/Time** option to set the year, month, day, hour, minute, second, and time zone in which the VP-100 is installed.

To set the time or time zone:

1. Use the **Up** and **Down** arrow buttons to select the field to change.

2. Use the **Left** arrow to decrease the value and the **Right** arrow to increase the value for that field.
3. Press the **OK** button when the values are set correctly.

Note: The VP-100 reboots to save the changes, if you modify the time zone.

4.3.13 Alarm

Use the **Alarm** menu to define what constitutes an alarm condition and how the VP-100 reacts when such a condition occurs. You can configure an alarm condition to be generated when motion is detected by the camera, if the video signal is lost from a camera, if the disk space is too low, if there is a disk error or if pos event. Once the alarm is generated, you can set the alarm notification through a beep, a message, a video popup, voice call, or E-mail.

The Alarm menu has the following submenus:

E-Mail - enables you to set up an E-mail address and verify it is working correctly.

Video Popup (sec) - sets the time for which a camera is displayed on your monitor when an alarm is generated.

Voice Call - enables you to set conditions that generate a voice call when an alarm is triggered.

Set Action - sets the action that will generate an alarm condition for each camera.

Note: The **Voice Call** option will only be displayed in the menu if the voice modem function is selected from the serial port menu.

To enter E-mail details:

1. Select the **E-Mail** option from the **Alarm** menu.
2. Press the **Right** button to confirm. The E-Mail submenu is displayed.

3. In the **E-Mail** menu, use the **Up** and **Down** buttons to select a field from the following:

Addr - Type the name of your mail server. See your network administrator for details about the address of your mail server.

Name - Type your user name.

Pass - Type your password.

Sender - Type the e-mail address of the sender.

Test - Checks the validity of the provided E-mail address by sending E-mail.

5. Press the **Right** arrow button to confirm your selection.
6. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
7. Use the **Arrow** keys to select the letters you need to complete the field and press the **OK** button to confirm.
8. When the field is complete, press the **Key Pad** button to turn off the on-screen keyboard.
9. Press the **OK** button to save your changes.

Video Popup

Use the **Video Popup** menu to set up the time period for which the video from the selected camera is displayed on your screen. The default screen is 20 seconds.

To set the video popup time:

1. Use the **Up** and **Down** arrow buttons to select the **Video Popup** option from the Alarm menu.
2. Use the **Left** arrow button to decrease the popup time and the **Right** arrow button to increase the time
3. Press the **OK** button to save your settings.

The Voice Call options enable you to set up a voice modem that will make a call when the selected event (such as a GPI or motion alarm, or video lost from a camera) occurs.

You must install a voice/fax modem on one of VP-100 COM ports, configure the COM port as a voice Call/device, and make its protocol the same as that of the voice/fax modem for the voice call function to work.

Voice call features:

- A voice call message can be recorded using an internal or external microphone, and can be played back using an internal or external speaker.
- Up to 60 voice messages can be recorded and stored on the VP-100 and used for different alarm events.
- Messages recorded for the voice call function must be between 5 and 10 seconds.

To set the Voice call function:

1. Use the **Up** and **Down** arrow buttons to select the **Voice Call** option from the Alarm menu.
2. Use the **Up** and **Down** arrow buttons to highlight the **Redial** option.
3. Use the **Left** and **Right** arrow buttons to set the number of Redial attempts (0-9).
4. Use the **Up** and **Down** arrow buttons to highlight the **Voice Repeat** option.
5. Use the **Left** and **Right** arrow buttons to set the number of times the message is repeated (0-9)
6. Use the **Up** and **Down** arrow buttons to highlight the **Time for Rec.** option.
7. Use the **Left** and **Right** arrow buttons to set the duration of the recording (5-10 seconds)

8. Use the **Up** and **Down** arrow buttons to highlight **the Modem Speaker** option.
9. Use the **Left** and **Right** arrow buttons to select either **Internal** or **External** speaker.
10. Use the **Up** and **Down** arrow buttons to highlight the **Voice File** option.
11. Use the **Left** and **Right** arrow buttons to select a voice file to use.
12. Use the **Up** and **Down** arrow buttons to highlight the **Rename** option.
13. Press the **OK** button to rename the current file to the file named in the **Voice File** field.
14. Use the **Up** and **Down** arrow buttons to highlight the **Record** option.
15. Press the **OK** button to make a recording.

Known issues with the voice call function

- There will be three seconds silence between a voice call being answered and the start of the message.
- If the voice call function calls a phone with an automatic answering machine, the VP-100 will behave as if the call has been answered.
- The VP-100 does not support non-standard ringing tones. If the VP-100 calls a phone and an unexpected tone is received, an error message will be generated.

Set Action

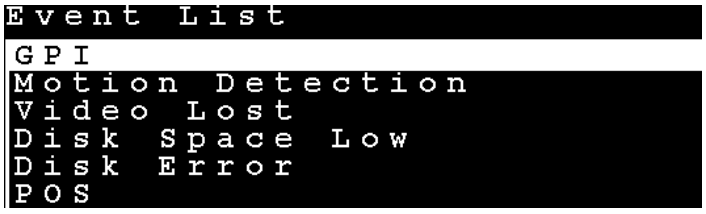
Use the **Set Action** option to define what action is taken by the VP-100 when an event occurs. The following options are available:

Video Lost - generates an alarm when the video from the selected camera is not available.

Disk Space Low - generates an alarm when the disk space is insufficient.

Disk Error - generates an alarm if there is an error while accessing the disk.

POS Event - generates an alarm if there is an error while integrate pos data with video.



To configure events using the Set Action option:

1. Use the **Up** and **Down** arrow buttons to select an event from the list.
2. Press the **Right** arrow button to display the submenu for the event with the following options:

Message - displays a message on screen when the event occurs.

Beep - sounds a beep when the event occurs.

E-Mail - sends an E-mail to the specified address when the event occurs.

Voice Call - sends a voice call to a specified number when an event occurs.

Video Popup - displays the video from the selected camera on your screen.

3. Use the **Up** and **Down** buttons to select the desired action from the following options:
4. Press the **Right** arrow button for the required action to view the submenu.
5. After enabling the action, set up the **Start** and **End Hour**, **Minute**, and **Second** to make the feature active during the specified time interval of the day. The default settings have the feature enabled throughout the whole day.

6. If you selected the **E-Mail** option as the desired action, you have to set up the recipient of the E-mail, the subject and the text matter of the E-mail. You can specify which of the 16 cameras status is in the E-mail.

4.3.14 ISP

If you are connecting to the Internet using dial-up, enter your ISP details using the **ISP** option from the System Setup menu. Set up the following options:

Phone No. - enter the telephone number that is dialed by the dial-up modem.

Name - enter the user name of your dial-up account.

Pass - enter the password for your dial-up account.

TCP/IP - set up automatic or manual TCP/IP. If the VP-100 is connecting through a DHCP server, an IP address is assigned to it automatically. If you want to set the IP address of the device manually, select the **Manual** option.

To enter ISP details:

1. Use the **Up** and **Down** arrow buttons to select a field to change.

2. Press the **Right** arrow button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select letters and numbers from the on-screen keyboard and use the **OK** button to confirm.
5. When the field is correct, press the **Key Pad** button to turn off the on-screen keyboard
6. Press the **OK** button to confirm the new field.

4.3.15 Registry server

The **Registry Server** menu enables you to set up the registry server for your device. If you are using a dynamic IP address for the VP-100, you can set up the device to post its IP address to the DVR registry server. You can then look up your IP from the MAC address or server name.

To enter Registry Server details:

1. Use the **Up** and **Down** arrow buttons to select a field to change.

2. Press the **Right** arrow button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select letters and numbers from the on-screen keyboard and use the **OK**

button to confirm.

5. When the field is correct, press the **Key Pad** button to turn off the on-screen keyboard.
6. Press the **OK** button to confirm the new field.

4.3.16 Running mode

Use the **Running Mode** menu to switch between Network Mode and ISP Mode, and between Mouse Mode and IR Remote Control Mode.

4.3.17 Algorithm

You can change the compression algorithm used by the VP-100 to record video. The VP-100 supports JPEG, MJPEG, and H.263 ,MPEG4 algorithms for compression. For the JPEG and MJPEG algorithms, the video quality is better but the data rate is also high. The H.263 and MPEG4 algorithm provides a good video quality with low data rate .

To set up the algorithm:

1. Use the **Up** and **Down** arrow buttons to select a field to change from the **Algorithm** menu.

2. Use the **Right** and **Left** arrow buttons to toggle the available options.
3. Press the **OK** button when the fields are set correctly.

4.3.18 NTP setup

Use the **NTP** (Network Time Protocol) **Setup** function to synchronize the real-time clock on the VP- 101 with the atomic clock. Before using this feature, make sure that the correct date, time and time zone have been set up. Also make sure that the DNS IP number has been set up under the TCP/IP settings.

The following options are available in the submenu:

Enable - enables the NTP function to synchronize the real-time clock.

Period (Hour) - sets up the time interval after which the time is re-synchronized.

Server - selects the NTP server from several pre-defined choices.

Edit NTP Server - enables you to choose your own NTP server.

Test&Save? - tests the server and saves the changes.

To change NTP settings:

1. Use the **Up** and **Down** arrow buttons to select a field to change from the NTP menu.

2. Press the **Right** button to confirm.
3. Press the **Key Pad** button on the remote control to display the on-screen keyboard.
4. Use the **Arrow** buttons to select letters from the on-screen keyboard and use the OK button to confirm.
5. When the field is set correctly, press the **Key Pad** button on the remote control to turn off the on-screen keyboard.
6. Press the **OK** button to save changes.

4.3.19 License Setup

There are two ways to grant POS license. One is key-in license key; the other one is plug-in a key-pro. So if you plug-in a key-pro you don't need to key in the license number again in the license setup menu. Use the **License** menu to key in the license number.

There are three POS License to three levels:

Level 1: Single POS unit – Can connect ONLY one cash register.

Single POS only one cash register. This level pos function doesn't need to register.

Level 2. 4 POS units -- Can connect maximum 4 cash registers.

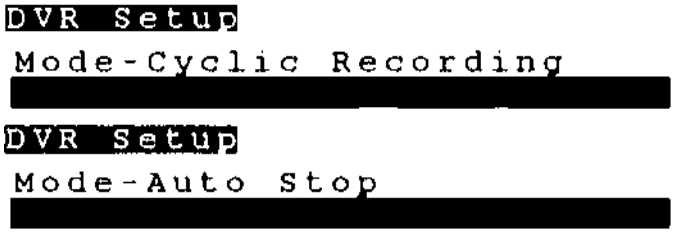
Level 3. Full functions – Can connect maximum 16 cash registers.

4.4 Record setup

Use the **Record Setup** menu to set all the record options for the VP-100. There are four **Record Setup** submenus - **DVR**, **Record Schedule**, **Motion Detection**, **GPI Trigger** and **Pre-Alarm**. This section covers each submenu in turn.

4.4.1 DVR Setup

Use the **DVR** menu to set the DVR (Digital Video Recorder) mode. Choose **Cyclic Recording** to keep recording on the hard disk continuously. Choose **Auto Stop** to stop recording when the disk is full.



You can set an alarm to be generated when the hard disk is full and send notification through a beep, E-mail, or text message.

To change the DVR mode:

1. Select the **Mode** option from the **DVR** submenu using the **Up** and **Down** arrow buttons on the remote control.
2. Use the Left and Right buttons to select either **Cyclic Recording**, or **Auto Stop.**
3. Press the **OK** button to save changes.

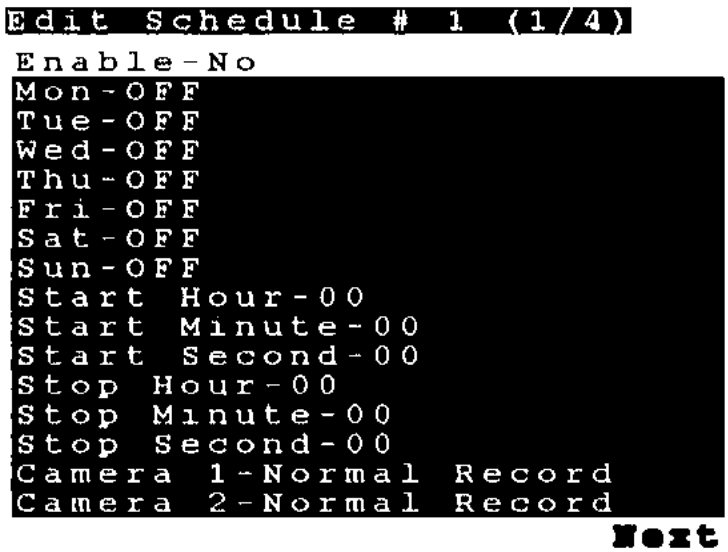
4.4.2 Record schedule

You can set up to 16 record schedules that automatically record at given times and days.

To configure a record schedule:

1. From the **Record Schedule** menu, pick a schedule to change from the displayed list, using the **Up** and **Down** arrow buttons.

2. Press the **Right** button to display the parameters for that schedule.



3. Use the **Up** and **Down** arrow buttons to select a field to change, from the following options:

Enable -enables the recording schedule.

Mon through Sun - enables recording on the specified days of week.

Start Hour/Minute/Second - sets the exact time when the recording starts.

Stop Hour/Minute/Second - sets the exact time when the recording ends.

Camera 1 through 16 - sets the recording mode for the selected camera. Select Normal Record to record continuously. Select Motion Detect to record only when motion is detected. Select OFF to disable recording.

Audio - enables recording of sound along with the video signal.

Frame Rate Setup - sets the frame rate for recording. Set Auto Speed to Yes and the device evenly divides the recording frame rate amongst all cameras. If set to No, you can manually set up the individual frame rates for each camera.

Weight recording- weight recording is setting special recording frame rate when an alarm of one of camera was triggered.

4. Use the **Right** and **Left** arrow buttons to change the value of that parameter.
5. Use the **Prev** Page and **Next Page** buttons to move to the previous or next page.
6. Press the **OK** button when all parameters are set.

4.4.3 Motion Detection

To set motion detection conditions:

1. Use the **Up** and **Down** arrow buttons to select the **Motion Detection** option from the **Alarm** menu and press the **OK** button.
2. When the motion detection menu appears, uses the **Up** and **Down** Arrow buttons to select one of the following options:

• **Enable** – configures the motion detection feature for each camera.

• **Sensitivity** – sets the sensitivity value for detecting motion.

• **Set Detect Area** – sets the area in the camera's field of vision over which motion is detected. This option is displayed only after you set the **Enable** option to **Yes**.

• **Enable all area** – sets the all area is motion detect area.

• **Disable all area** –set no area is motion detect area.

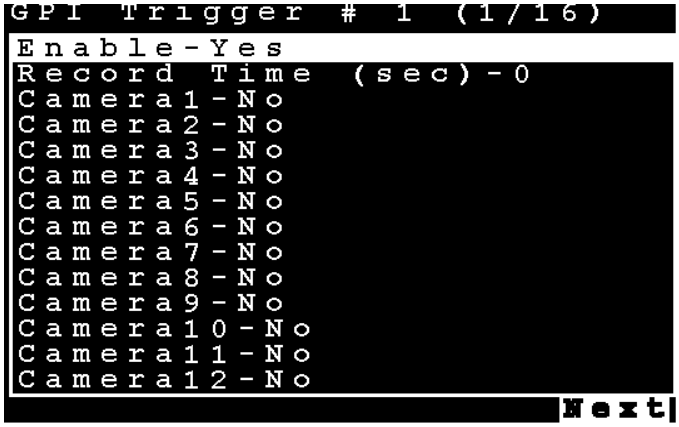
3. Select the **Enable** field and use the **Left** and **Right** arrow buttons to toggle between **Yes**, to enable the motion detection feature, and **No**, to disable it.
4. Select the **Sensitivity** choice and use the **Left/Right** arrow buttons to decrease/increase the sensitivity. We recommend that you keep the sensitivity level to its default setting. If the sensitivity level is adequate, an orange square is displayed in the upper left-hand corner of the screen when motion is detected.
5. Select the **Set Detect Area** option and press the **Right** arrow button to configure the area as follows:
   i. The highlighted area in red is the area monitored by motion detection. Use the **Arrow** buttons to move the cursor.
   ii. Press the **OK** button to cut off any areas where you want to disable motion detection. If you want motion detection enabled in the entire field of vision of the camera, leave the screen completely red.

iii. Press the **Cancel** button to return to the previous menu when done.

6. Select the **Save** option and press the **OK** button to save all your changes.
7. Use the **Prev Page** and **Next Page** buttons to move to the motion detection menus for all connected cameras.
8. Press the **OK** button when settings are correct. You need to provide E-mail details if you want an E-mail to be sent when an alarm occurs.

4.4.4 GPI Trigger

Use the **GPI Trigger** function to enable recording video from specified cameras when triggered by an external alarm (GPI) connected to the system.

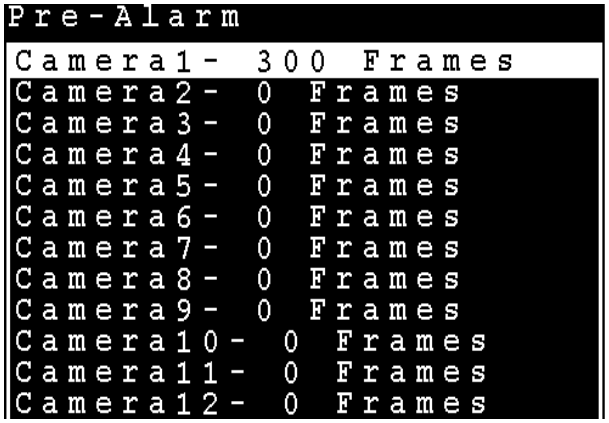


4.4.5 Pre- Alarm

Use the **Pre-Alarm** function to determine how many frames are recorded before an alarm event occurs. Each camera can be set separately and you can record up to 300 frames.

To set the Pre-Alarm frame capture:

1. Use the **Up** and **Down** arrow buttons to select **Pre-Alarm** option from the **Record Setup** menu.



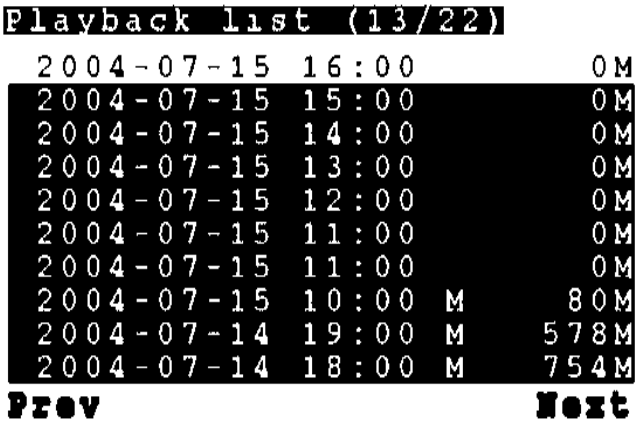
2. Press the **OK** button to display the Pre-Alarm menu.
3. Use the **Up** and **Down** arrow buttons to select the camera to change from the list.
4. Press the **Right** arrow button to confirm.
5. Use the number buttons on the remote control to enter a new value.
6. Press the **OK** button when the value is set correctly.

4.5 Playback

Use the **Playback** function to display a list of all recordings stored on the VP-100. Use the **Up** and **Down** arrow buttons to select a recording to play back and press the **OK** button to confirm. The chosen track is played. Use the **Prev Page** and **Next Page** buttons on the remote control to move between pages.

4.5.1 Playback list

Use the **Playback list** function to display a list of all recordings stored on the VP-100 as follows.



1. Use the **Up** and **Down** arrow buttons to select a recording to play back. The alarm condition which caused the file to be recorded is indicated in the list. For instance, in the screen shot shown here, the letter **M** next to a file indicates that the file was recorded after motion was detected by the camera. "**A"** indicates that the file was recorded after a GPIO event. An asterisk (*) before the date indicates that the file is locked.
2. Press the **OK** button to confirm. The chosen recording is played back.
2. Press the **Display** button on the remote control to display various properties of the recorded file. The date and time of recording are displayed in the upper right corner.

Progress - A one hour time line is displayed at the bottom of the screen with the moving orange line indicating the status of playback.

Recorded Data - The aqua colored portion is where there is recorded data in that hour . A full blue line means that the whole hour interval was recorded.

GPI - The screen shows where alarm triggers were generated. The red bar shows the trigger. To move to the next motion detection or alarm trigger event, press the **Right/Left** arrow buttons.

Motion Detection – The yellow bars represent where motion detection was set off.

Searching for a file:

The VP-100 playback list can be searched for a specific file. You can conduct the search based on time, event, or text.

4.5.2 To search for a recorded file:

1. While viewing the play list, press the **Menu** button to display the menu.

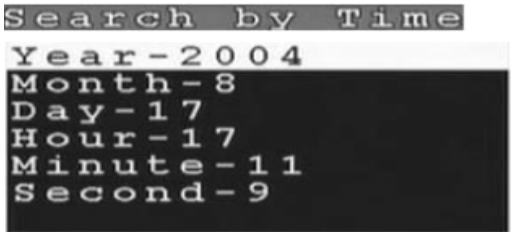
2. Select one of the following options using the **Up** or **Down** arrow buttons:

Search by Time - searches the list of recorded files for the specified recording time.

Search by Event - searches the list of recorded files for the specified event such as a GPIO trigger that occurred within the specified time interval.

Search by Text - searches the list of files recorded with POS information for specified text that was recorded within the specified time interval.

3. Press the **Right** arrow button to view the submenu for the selected option.



4. Select each of the options such as **Year, Month, Day,** and so on using the **Up** or **Down** arrows.
5. Modify the settings as required using the **Left** and **Right** arrow buttons.

Note: If you select the **Search by Event** option, choose an event from **GPI 1~16**. If you choose the **Select by Text** option, enter the text using the **Key Pad** button.

6. Press **OK** when done to conduct the search.

4.5.3 Locking files

To prevent accidental deletion of recorded files, you can lock a file. This also prevents over-writing of the file when the recording mode is set to **Cyclic.**

To lock a file:

1. While viewing the play list, use the Up/Down arrow buttons to select the desired file.
2. Press the **Menu** button to display the menu.

3. Select the **Lock File!** option using the **Up** or **Down** arrow buttons:
4. Press the **OK** button to confirm.

The file is locked and cannot be deleted or over-written. There is an asterisk (*) ahead of the file name. To unlock a file, follow the same procedure and select the **Unlock File!** option from the menu.

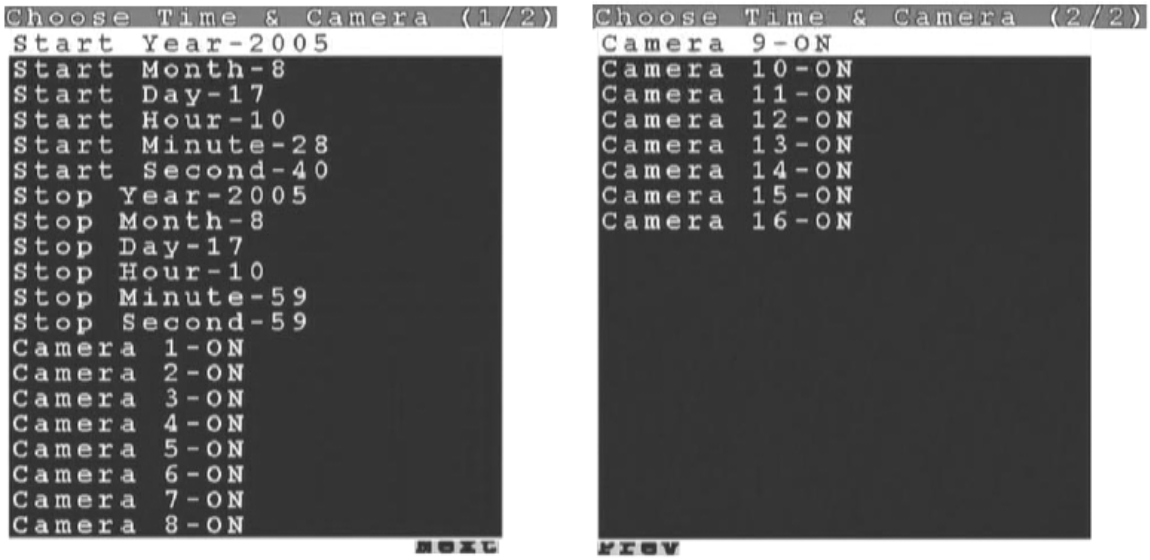
4.5.4 Backing up the data

If the VP-100 is equipped with CD/RW, DVD+RW drive, you can back up your recorded files to a CD, DVD, or USB hard drive.

To back up your data:

1. While viewing the play list , press the **Menu** button to display the menu.
2. Select the **Backup** option using the **Up** or **Down** arrow buttons.
3. Press the **OK** button to confirm.

The VP-100 detects if there is a backup device connected to it and starts backing up data.



Note: The VP-100 will begin to collect data as soon as the above screens are displayed. When the required data has been collected, the backup can begin.

4.6 System Maintenance

Press the **Menu** button on the remote control to display the main menu on screen. Use the **Up** and **Down** arrow buttons to select one of the five options and press the **OK** button to confirm your choice.

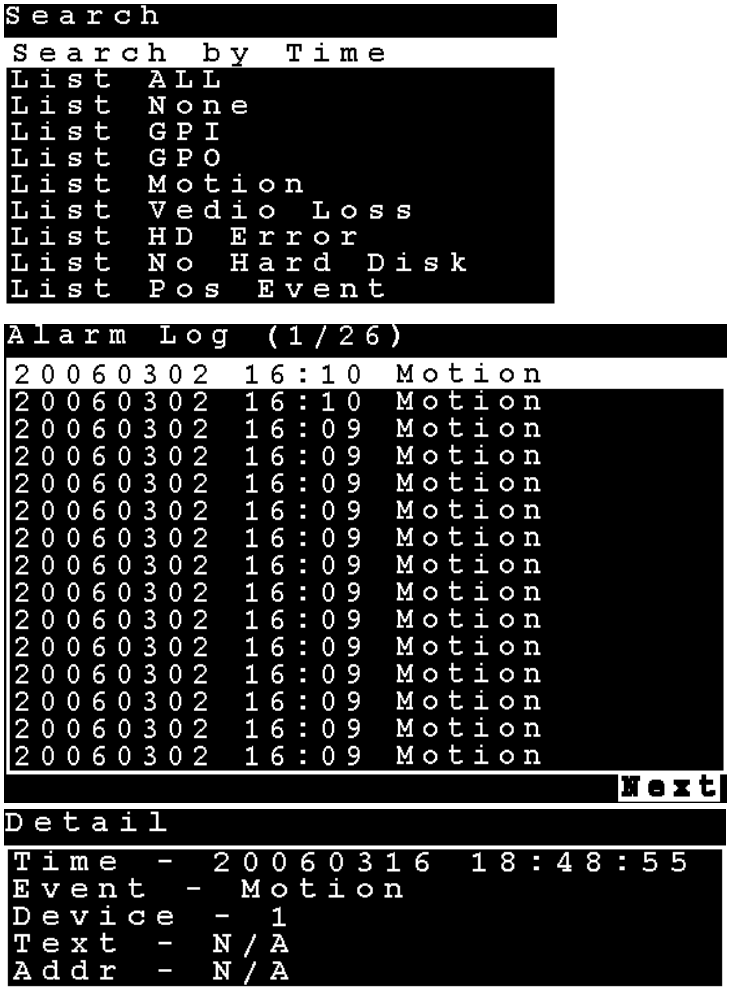
4.6.1 Alarm log

Any alarm will be written into alarm log include video loss, disk error….etc. User can search alarm log by specific time.

1. Press “ok” button on “alarm log” option
2. There are many ways to quickly reach alarm log information. Include search by time, directly list all

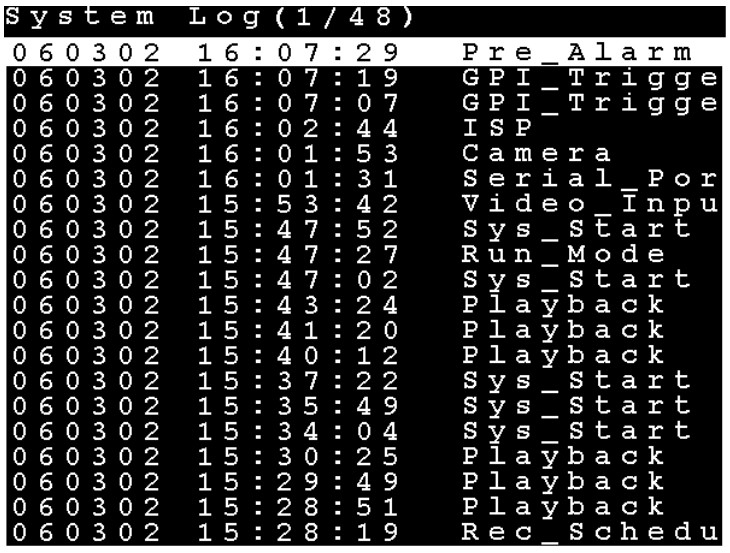
log, or only GPI, GPO or motion triggered log….

3. After selected one of the searching way, user can see the log and press “ok” button to enter submenu to get more detail information of log.



4.6.2 System log

Any operation will be written into system log include local operation and remote operation. User can search system log by specific time.



4.6.3 Default settings

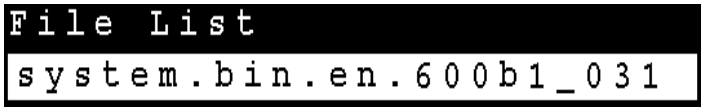
Use the **Default Settings** option to reset all configurable parameters to their factory default settings. When the **Default Settings** option is chosen from the **System Setup** menu, a message is displayed asking you to confirm. Press the **OK** button to confirm, or the **Cancel** button to cancel the operation.

4.6.4 Configuration file

User can backup or restore system configuration values to or from a file. Use Up and Down arrow buttons to select either **Backup** or **Restore** Configuration.

4.6.5 Revise firmware

Use the **Revise Firmware** option to upgrade the firmware in the VP-100. The firmware can be revised through an external read-write CD drive, a USB flash drive, or a USB thumb drive. Connect the device to the VP-100 and then use this option.



4.7 System Shutdown

Use the **System Shutdown** option to shut down or reboot the system. To shut down or reboot the system:

1. Use the **Up** and **Down** arrow buttons to select either Shutdown or Reboot.

2. Press the OK button to confirm.
3. Press the **OK** button to confirm the operation again, or press the Cancel button to cancel the operation.

5. DVR Network Operation

5.1 Introduction

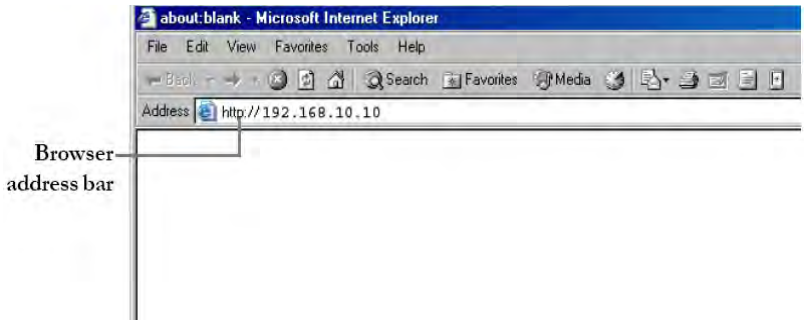
VP-100 can also be configured over a network using a PC running a standard web browser. This chapter covers network operation.

5.2 Connecting

The VP-100 GUI can be viewed from a standard internet browser when the device is connected on the same network as your PC or if it is connected through a cable or xDSL modem to the Internet. Refer to the hardware manual for more information about making connections using the RJ-45 Ethernet (LAN) port. Make sure that the VP-100 is configured for **Network** running mode.

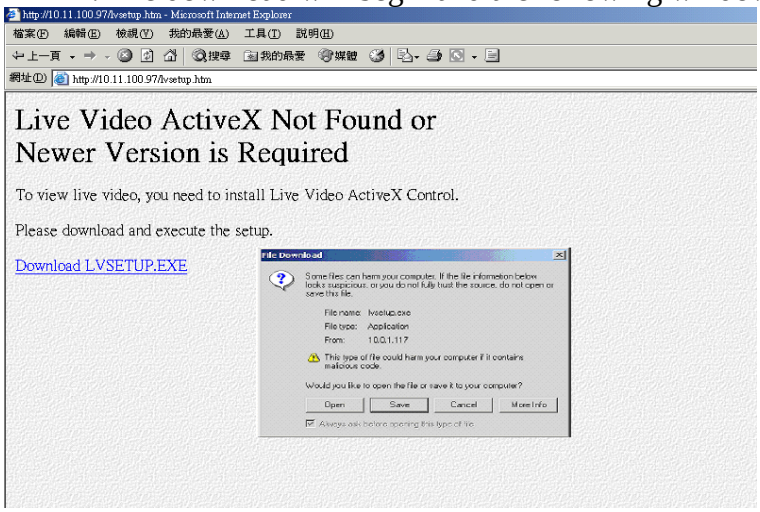
To access the VP-100 from remote browser:

1. Open a browser window on a terminal that has network access to the VP-100.
2. Type the IP address of the VP-100 in the browser address bar.

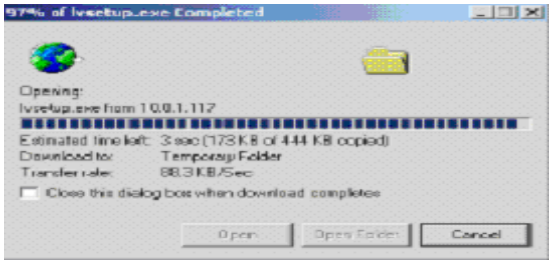


Default User Name: webmonitor
Default Password: oyo

The first time you attempt to view the VP-100 user interface using a web browser, an ActiveX installation procedure will begin automatically. When the following window appears, click on the **Download LVSETUP.EXE** link. The download will begin and the following window will appear.

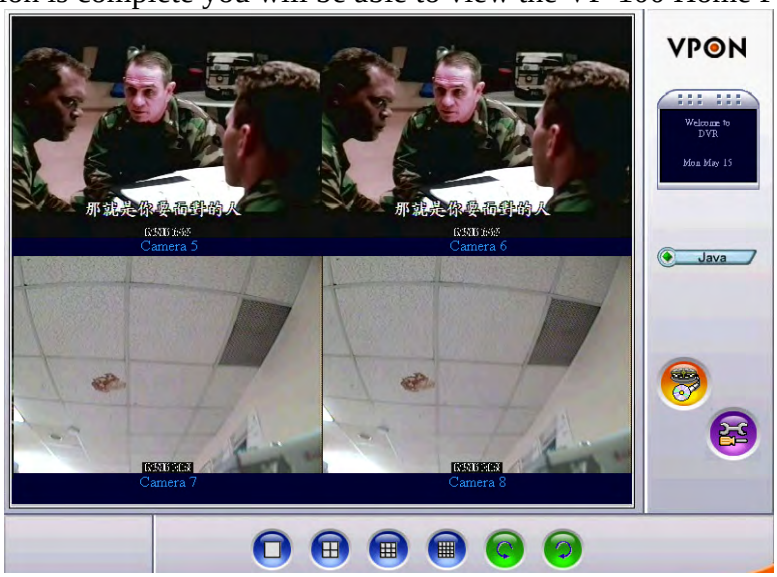


Click **Open** to download and install the new plug-in. The download status is displayed and you are prompted for an installation location.



Click **OK** to complete the installation. The following message will appear.

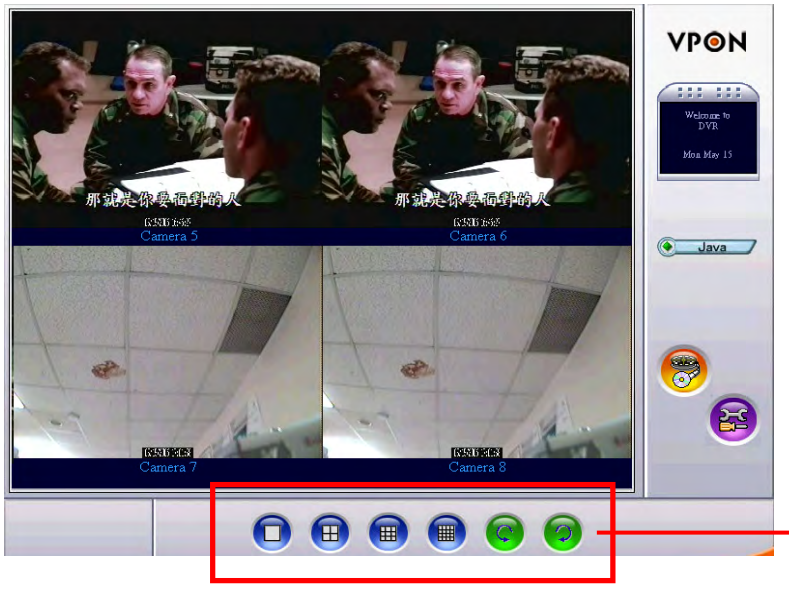
When installation is complete you will be able to view the VP-100 Home Page.



The ActiveX installation is necessary only at first time.

5.3 Surveillance screen panel

The **Surveillance Screen Panel** is very similar to the one on the local GUI. See **Surveillance screen panel** on page 8.

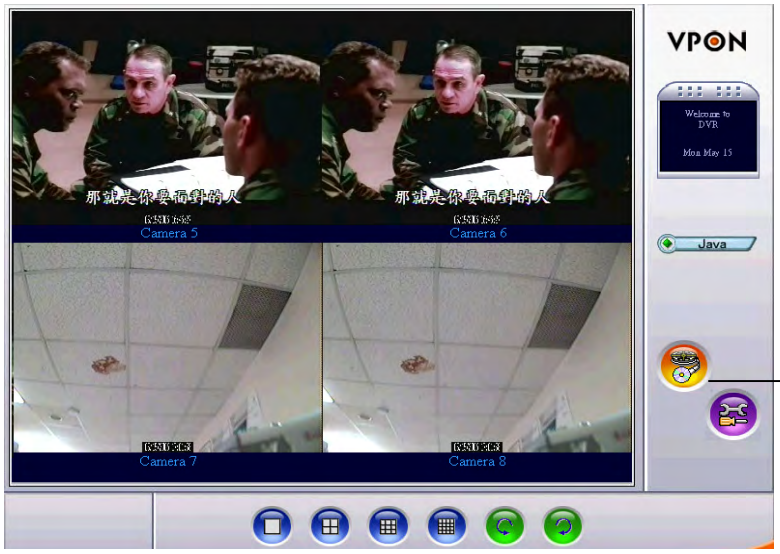


Surveillance screen panel

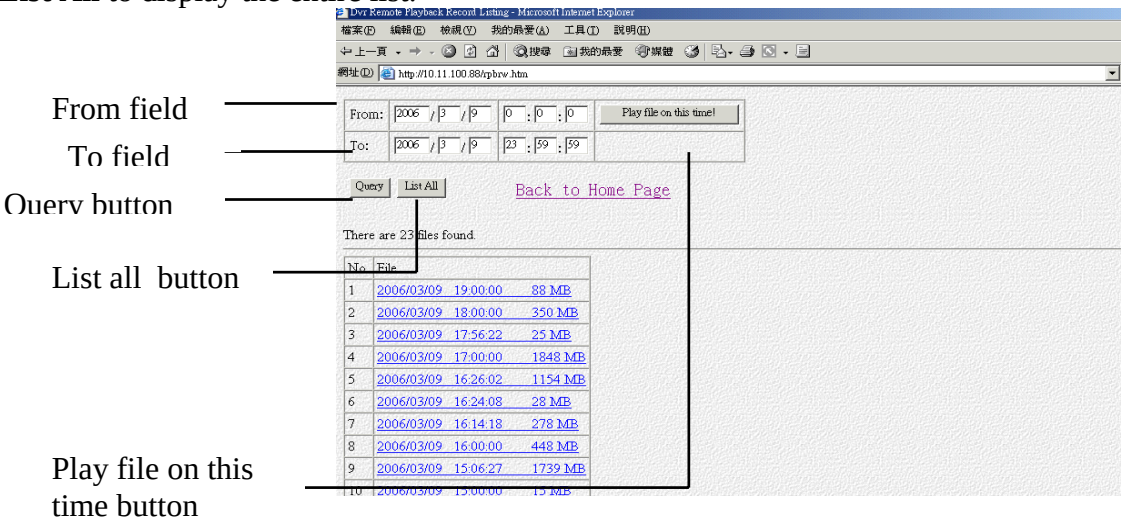
There is no Sequence button on the network GUI. This feature is only available on the local GUI.

5.4 Play button

Click the **Play** button to display a list of all the available recordings stored on the VP-100 in a new browser window.



Click **List All** to display the entire list.



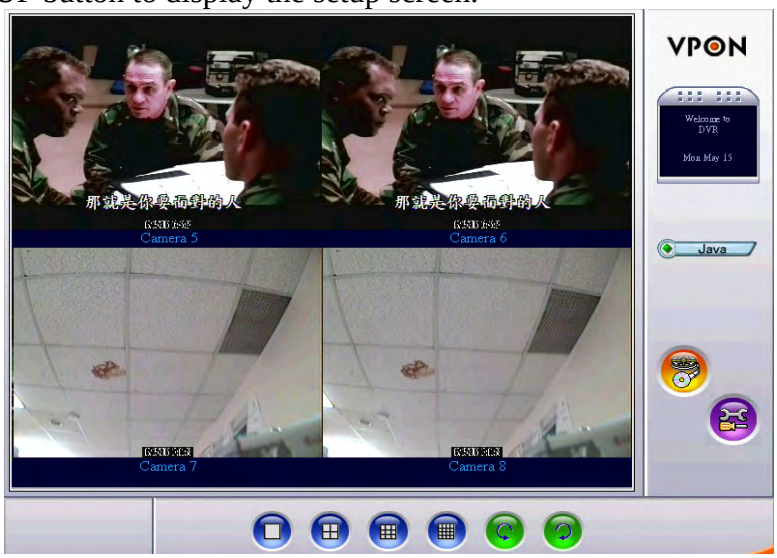
Click on a video recording to play it in a separate browser window. Play a recorded video from a specific time and date by entering the time and date in the **From** field and clicking **Play file on this time.**
Search for files between particular times and dates by entering the dates in the To and **From** fields and clicking **Query**.

5.5 PTZ panel

The network GUI PTZ panel is exactly the same as the local GUI PTZ panel. See **PTZ panel** on page 10.

5.6 System Setup

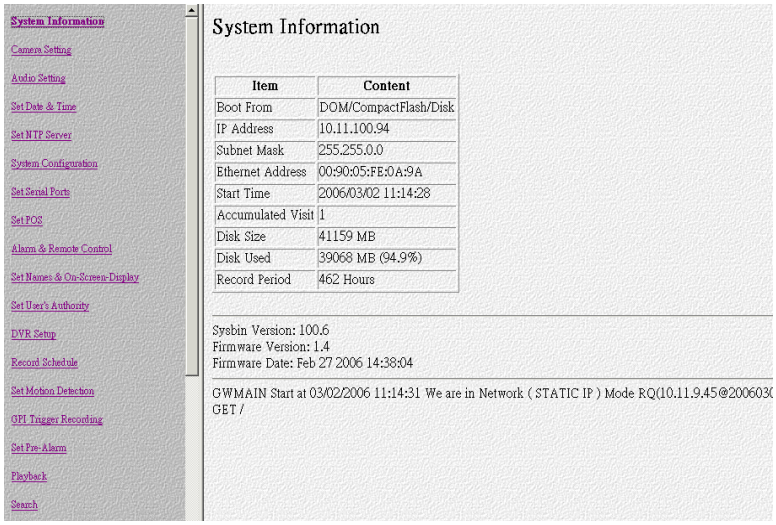
Click the SETUP button to display the setup screen.



Use the setup screen to change user definable parameters for the VP-100. Choose a submenu from the list on the left and click the link to display it.

5.6.1 System information

Click the **System Information** link to display the **System Information** page.



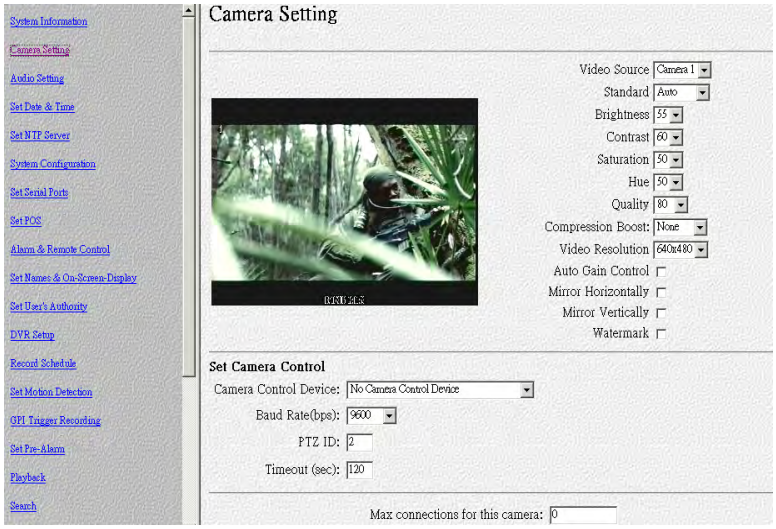
No information on this page is changeable.

5.6.2 Camera setting

Use the **Camera Setting** page to change the video settings for each of the connected cameras. Refer to **Video** on page 20 for more information about the parameters. Each setting can be changed using the drop down menus and check boxes.

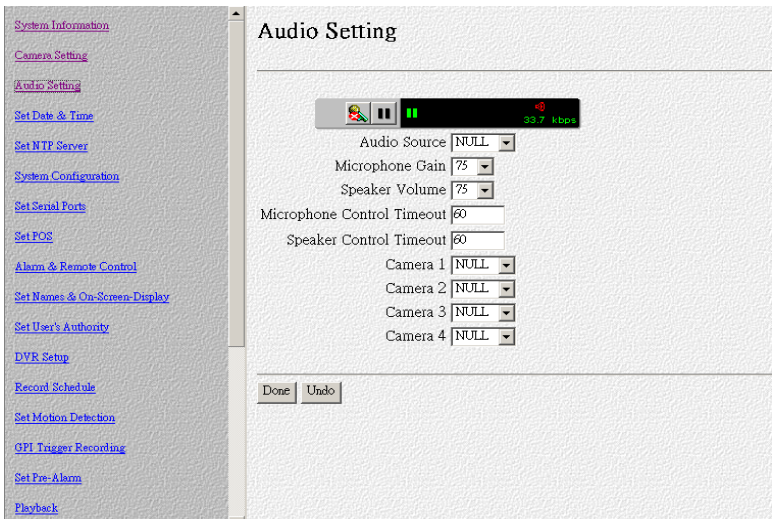
• **Set Camera Control** – sets PTZ control for the cameras. See **PTZ control** on page 20 for more details.

You can also enter a maximum number of connections allowed for each camera and maximum bandwidths.



5.6.3 Audio setting

Use the **Audio setting** menu to set parameters such as Mic Gain, Speaker, Mic Timeout and Speaker Timeout. You can also perform a self test to test if the microphone and speaker are working correctly. There are multiple audio inputs, user can define which audio mapping to which camera. “Audio1” is audio input from motherboard. Other audio inputs are from video capture cards. Audio out is from motherboard.

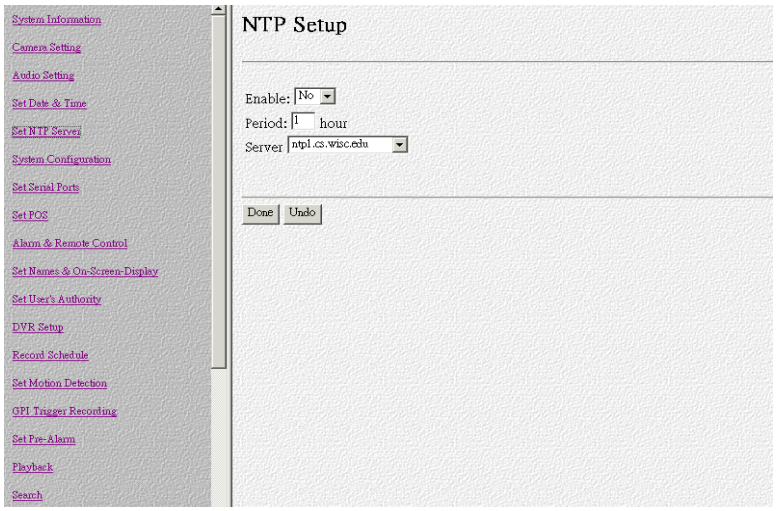


5.6.4 Set time and date

Use the **Set Time and Date** page to set the time and date. Select a time zone from the drop down menu and enter new local time and date using the keyboard. Click **Done** when all fields are updated. Click **Undo** to revert to original settings. If you change the time zone, the system will reboot.

5.6.5 Set NTP server

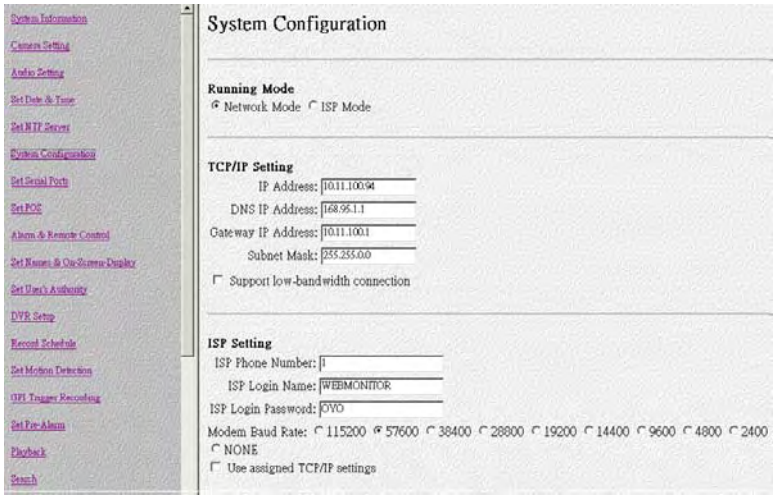
Use the **Set NTP Server** page to set parameters for a NTP (Network Time Protocol) server to synchronize the device time with the atomic clock.
Select a server and enable it using the drop down menus. Enter a time period using the keyboard to indicate the period after which the time is resynchronized. Click **Done** when all parameters are entered correctly. Click **Undo** to revert to original settings.



5.6.6 System configuration

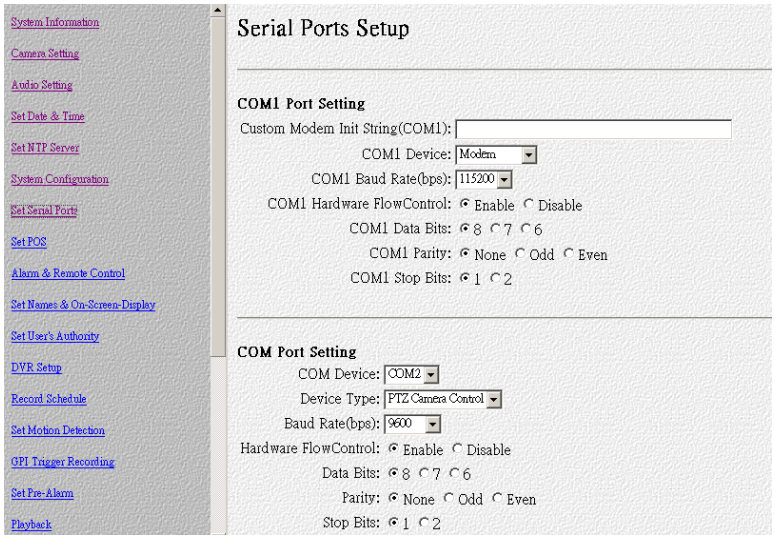
Use the **System Configuration** page to set the following parameters for the VP-100.

- **Running mode** – sets the operation and control mode.
- **TCP/IP setting** – configures TCP/IP. Fill in the IP address and subnet mask settings.
- **ISP setting** – sets up dial-up parameters for sending E-mails.
- **Account Setting** – sets up the administrator and user, and their passwords.
- **COM1/2 Port Setting** – sets up the serial ports.
- **Set IP Registry Host IP Address & Path** – sets up the registry server.



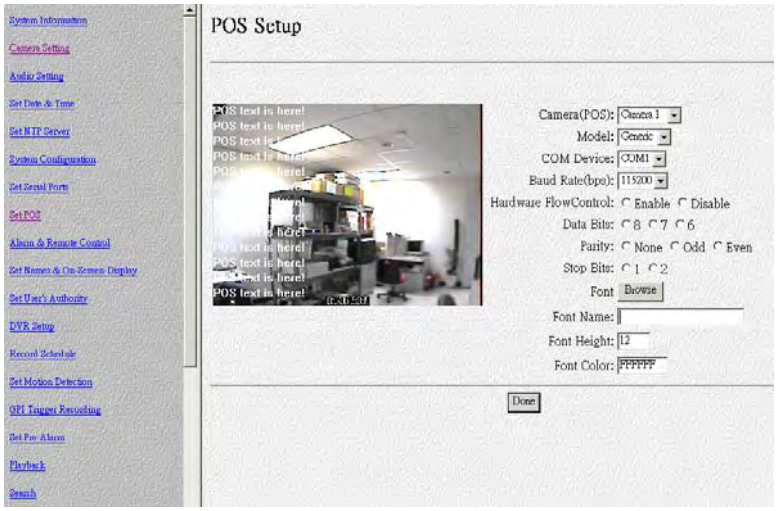
5.6.7 Set serial ports

The RS232 serial ports (COM1 and COM2) are used to attach PTZ camera control cables, external modems, or GPIO modules to the VP-100. Use the Serial Port menu to set parameters for the two serial ports.



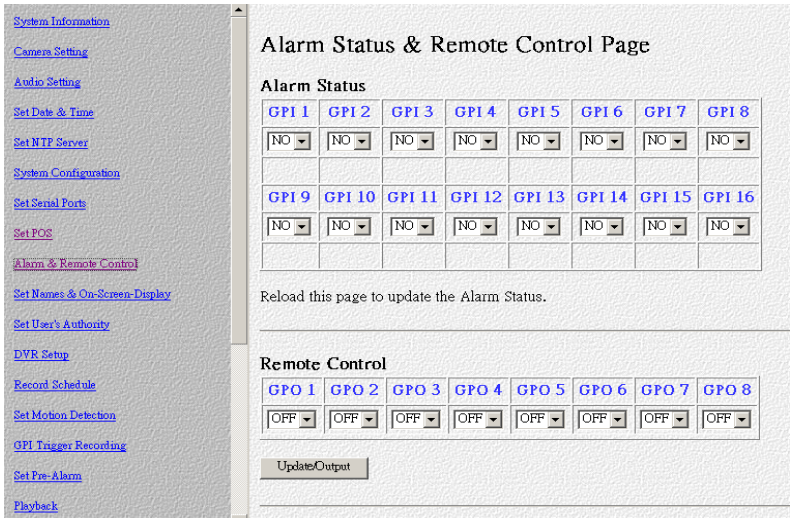
5.6.8 Set pos

Use the Set POS page to set the color and front size for each of the connected cameras. Use the serial Ports menu to set the following parameters. Click the “Done” button to save the new settings.



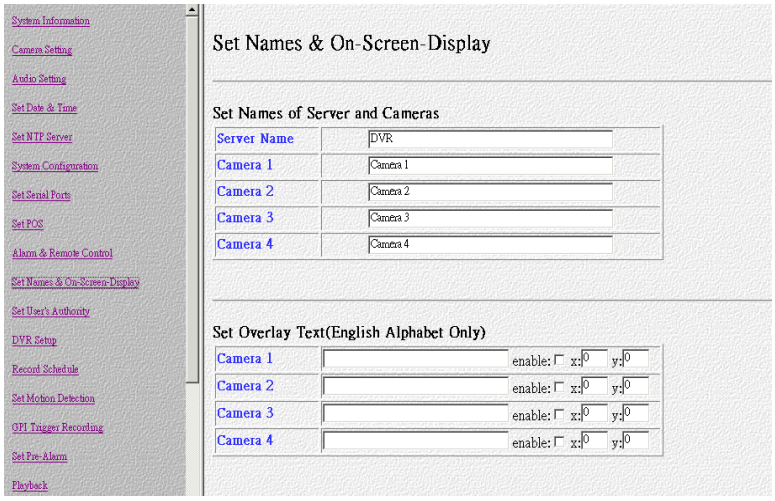
5.6.9 Alarm and remote control

GPI devices will show NC (normally closed) or NO (normally open) as the status of the switch. Depending on the input, you can change the status of the GPO devices on On or Off as required.



5.6.10 Set names and on-screen display

Use the **Set Names and On-Screen Display** page to set names for the server and all cameras. You can also use this page to enter the text to be displayed on screen with each camera under the **Set Overlay Text** option. Use the **x** and **y** fields to define the position of the displayed text. Use the **Set Time Stamp** option to define the format of the time stamp and where it appears on the display for each camera.

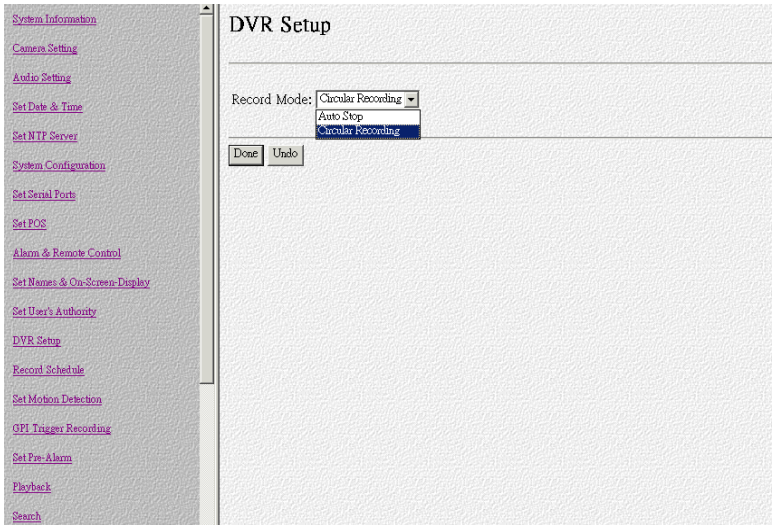


5.6.11 Set user's authority

Use the **Set User's Authority** page to set the individual privileges of up to 256 users. Enter the user number in the **User** field. Assign a name and password in the respective fields. To restrict users from viewing particular cameras, select the required cameras from **Camera 1~16**. Enable **Camera Control**, and **Playback** of the video recording as needed.

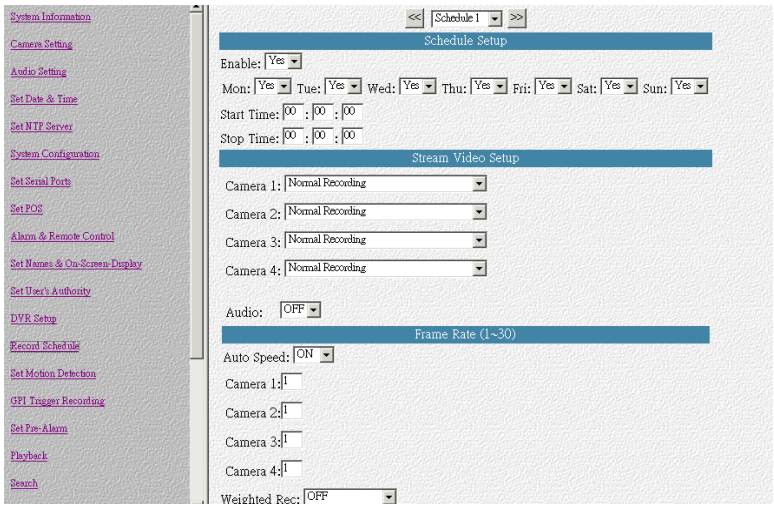
5.6.12 DVR setup

Use the **DVR Setup** page to set the recording mode to either **Auto Stop** (stops when disk space runs out) or **Cyclic Recording** (overwrites oldest recordings when disk space runs out).



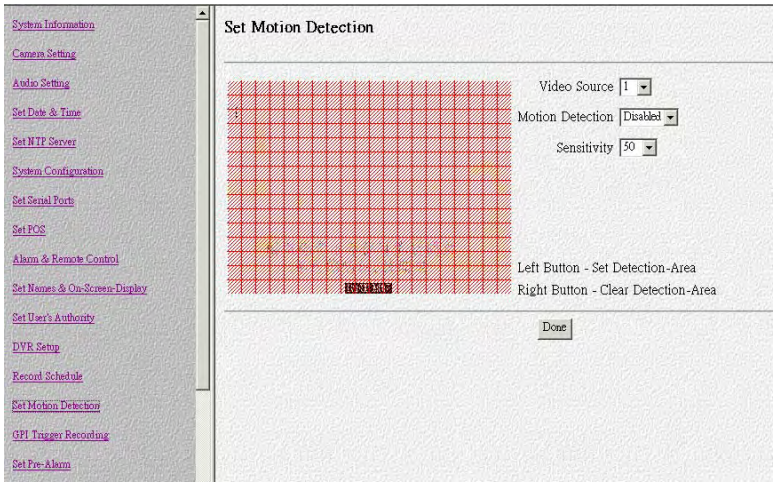
5.6.13 Record schedule

Use the **Record Schedule** page to set up to 16 automatic recording schedules. For each record schedule, select the day, and start and stop times for recording. For each camera, select **off**, **Normal Recording**, **Motion Detection Recording , GPI Trigger Recording or MD&GPI Trigger Recording** to record only when motion is detected. Enable Audio if you want to record audio also. Weight recording is setting special recording frame rate when an alarm of one of camera was triggered. Select a Frame Rate of recording for each camera.



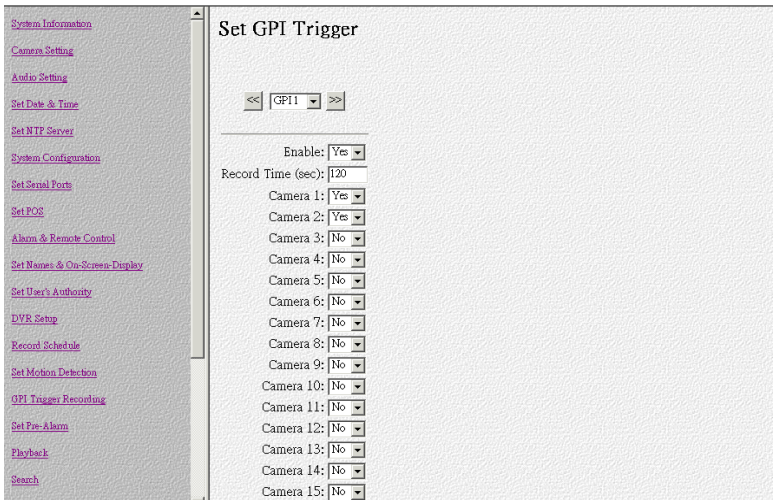
5.6.14 Motion detection

The **Motion Detection** page enables you to set the motion detection feature for each camera. You can adjust the area in the camera's field of vision that will checked for motion. Click on the grid to enable or disable motion detection. The red rectangle in the upper left corner indicates that motion is being detected.



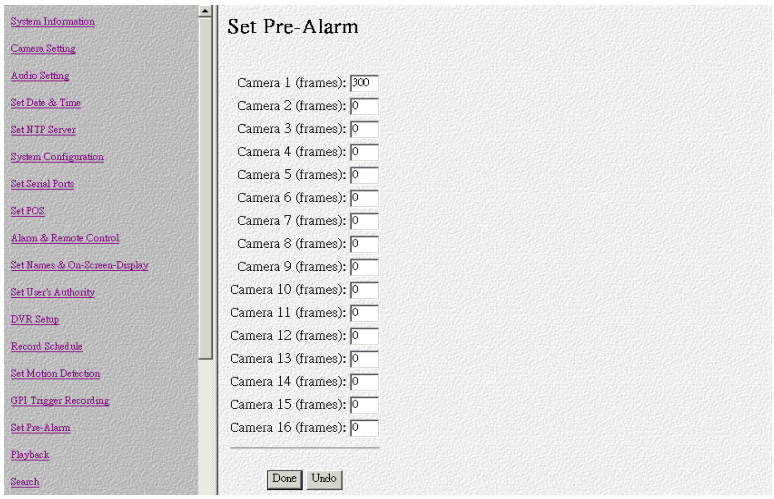
5.6.15 GPI Trigger Recording

Use the **GPI Trigger Recording** to set up to 8 automatic GPI recording schedules. Clink the "Enable" item box to start the GPI Trigger, and then set the timetable for recording the Trigger. Click "Done" button to save the new setting.



5.6.16 Set Pre-Alarm

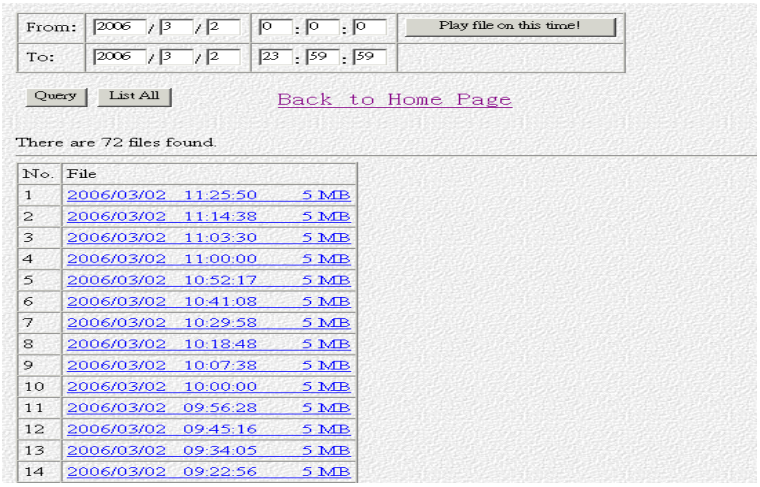
The Set Pre-Alarm page on the network GUI enables you to set the number of frames that are recorded from each camera before a trigger is generated. Up to 300 frames can be recorded.



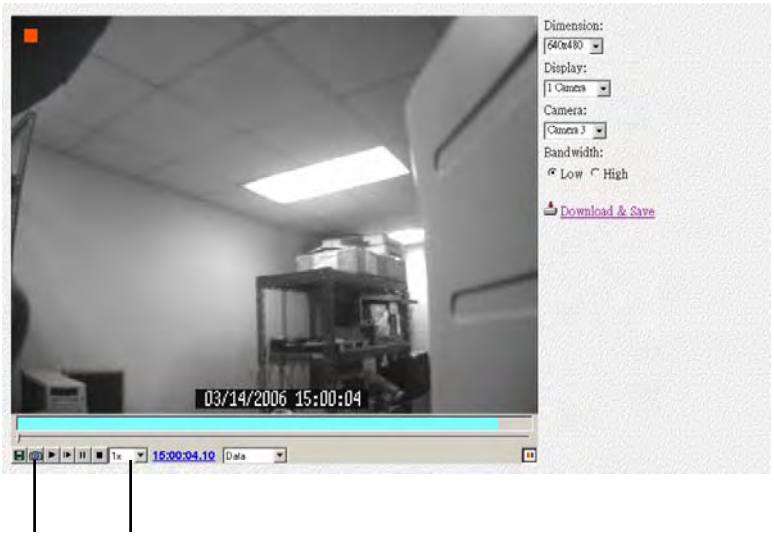
5.6.17 Playback

The **Playback** page enables you play back a video recording of your choice. Specify the day and time in the **To** and **From** fields and click the **Play file on this time!** field to play back files in the specified time

duration. Click **List All** to list all recorded files. Click **Query** to search for a particular file based on **Event** or **Text**. Click a file to play it back.



The file plays back in the browser window with the status at the bottom. Specify the resolution in the **Dimension** field. Select the camera whose video you want to watch in the **Camera** field and select the number of cameras (1, 4, 9, or 16) in the **Display** field. Specify a high or low **Bandwidth** and click **Download&Save** to save the video recording to your local disk. Select **Data**, **Motion**, or **GPI** to view the status of the recorded file and the instances where the recording was triggered by motion detection or GPI.

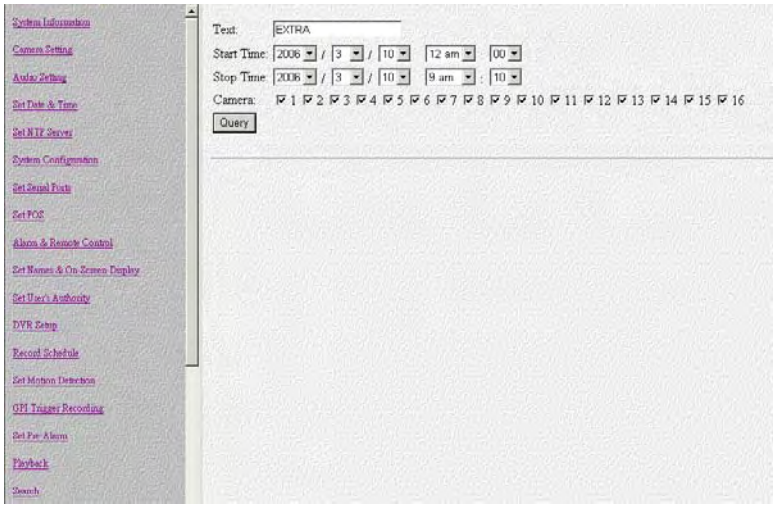


Note: The **playback start** time can be changed to jump to any time during the recording. Click on the **playback start** time and change the time using the keyboard.

5.6.18 Search

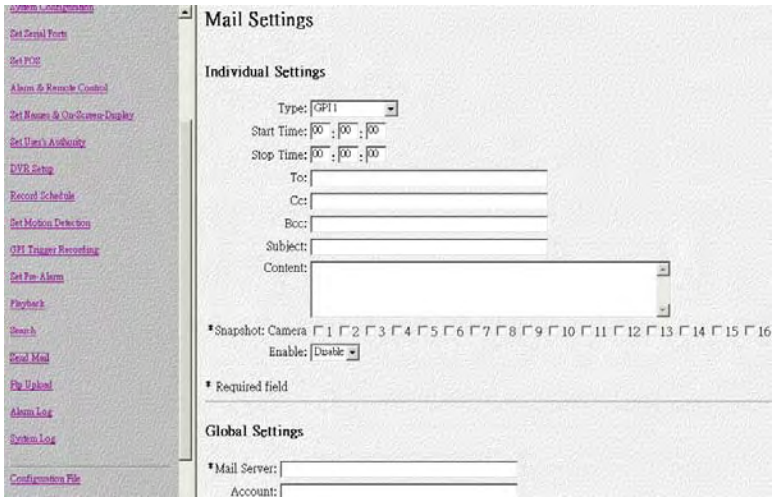
Search video clips based on text(POS transaction data).

1. Click search button and enter the submenu.
2. You can search by any key word base on POS transaction data (text).
3. If you want to find out data faster, we recommend you to narrow down searching day, time and cameras to get faster response.
4. Press Query button when done to conduct the search.



5.6.19 Send Mail

The VP-100 can send a snapshot by E-mail when triggered by an alarm. Use the **Send Mail** page to set E-mail details for each camera.



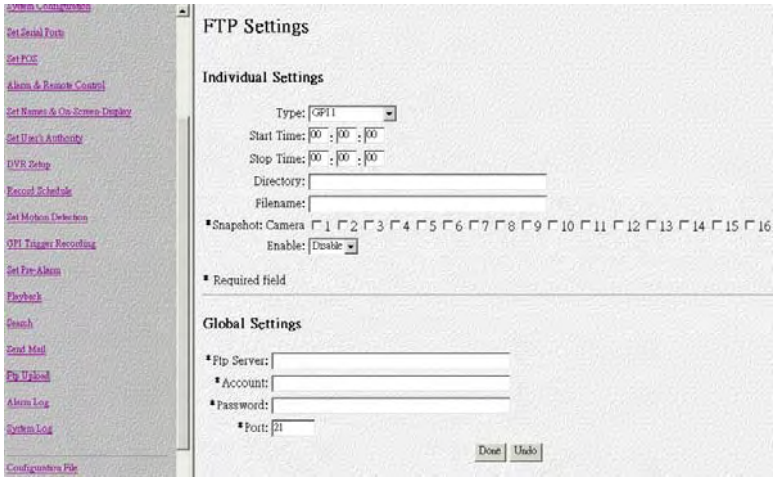
Under the Individual Settings, specific the type of event that cause the E-mail to be sent in the Type field by choosing Motion Detect or GPI. Fill in the start and stop time for monitoring the alarm, the recipients, subject and content of the E-mail. Enable a snapshot of the camera video to be attached to the E-mail by selecting cameras in the Snapshot option.

Under the Global Settings, fill in the mail server details. Fill in the details using mouse and keyboard and click **Done** when complete.

Note: If you set a domain name in the mail server setting, provide the DNS IP address in the system Configuration.

5.6.20 Ftp Upload

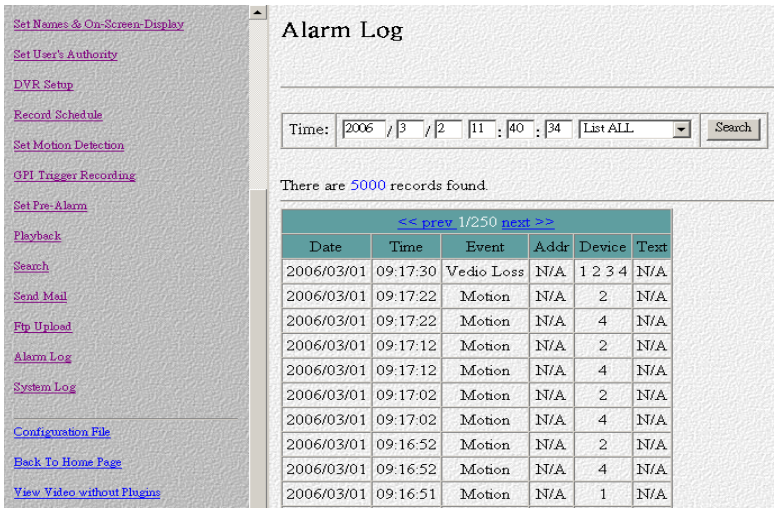
The VP-100 can upload snapshots from the camera using FTP to a predefined location in the event of an alarm. Use the **FTP Upload** page to set FTP details.



Under the **Individual Settings**, specify the type of event that causes the E-mail to be sent in the **Type** field by choosing **Motion Detect** or **Continuous.** Fill in the start and stop time for monitoring the alarm, the file name and directory for FTP. Enable a snapshot of the camera of video to be uploaded by selecting cameras in the **Snapshot** option.

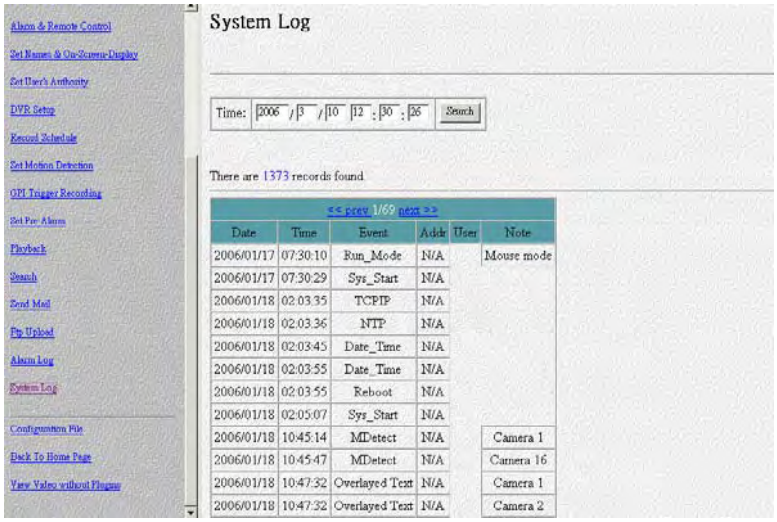
5.6.21 Alarm log

Any alarm will be written into alarm log including motion trigger、GPIO trigger、Disk error、Video loss、POS event.…..etc. User can search alarm log by specific time and double click one of the alarm log on the list to play specification-recording data.



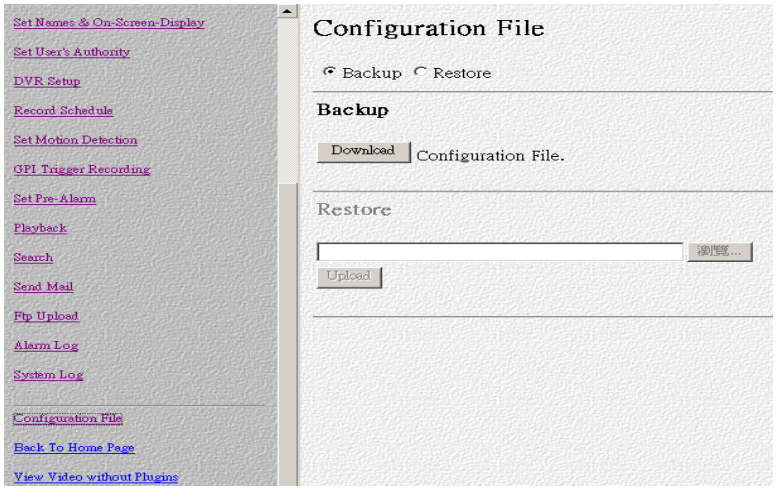
5.6.22 System log

Any operation will be written into system log include local operation and remote operation. User can search system log by specific time.



5.6.23 Configuration file

User can backup or restore system configuration values to or from a file.

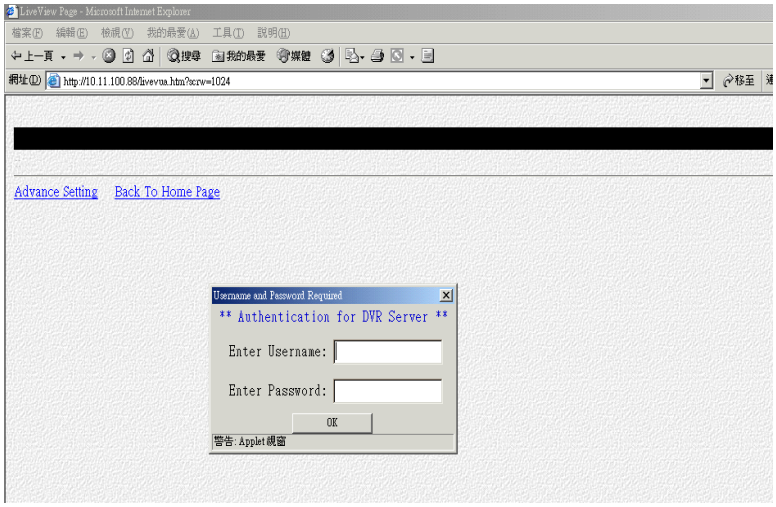


5.6.24 Back to home page

The **Back To Home Page** link will redirect you back to the VP-100 home page.

5.6.25 View video without plug-ins

You can view video even if the machine you are working on does not have the plug-ins necessary for video monitoring. Click the **View Video Without Plug-ins** link to view the video page without plugins. You will need to enter an administrator user name and password to view without plug-ins.
Note: Your browser must be configured to support Java applets to view without plug-ins.



6. Advance Network Setting

6.1 Connecting to the network

Note: To connect the DVR to an existing LAN, set up by using the supplied IrDA remote control first.

1. Connect an Ethernet-capable computer to the DVR LAN port using an RJ-45 UTP cable or connect both of the PC and DVR to a same hub.
2. The default IP address for the DVR is 192.168.10.10. Set your PC IP address to 192.168.10.xxx (where xxx is a value between 0 ~ 254). Set the subnet mask to 255.255.255.0.
3. Reboot the PC.
4. Use IE Web browser version 60. SP2 up to access http://192.168.10.10. The login dialog box will appear. If you have previously changed the administration login or password, enter the login name and password you previously set. Otherwise, enter the default login name “webmonitor” and the password “oyo” then click OK.
5. For first time accessing DVR, you will be prompted to install Live Video ActiveX. Download and run the file to install ActiveX. Then restart IE browser, you will be able to see the videos. If you choose not to install Active X, you can view videos from the DVR by clicking on the View Video without Plugins link at the bottom of the page. At the prompt, enter the same administrator login name and password as before. This uses a Java applet to display the video.

6.2 Configuring Static IP addresses

Static IP addresses can be public or private. Public IP addresses allow access to the DVR from the Internet. Private IP addresses only allow users on the same LAN to access the DVR (regardless of whether the LAN is connected to the Internet or not). Ask your network administrator to assign an appropriate IP address.

6.3 Configuring Dynamic IP addresses

If your LAN or Internet connection uses DHCP, the DVR needs to be registered with a registry server. Users wanting to view your DVR can access the registry server to find the IP address. By default, the DVR is set to be registered at http://registry.nfic.com.tw. This is a server set up by Formosa21 for DVR series users. If you wish to set up a different registry server, Formosa21 recommends using a VP-300 video server, although other servers may be used. See your network administrator for instructions on selecting a registry server.

The Registry Host Address, Registry HTTP Port and Registry Host Path in system Configuration under “Advance Settings” are the set to the default settings of the Formosa21 registry server. The Registry Host Address is the IP address or Fully Qualified Domain Name (FQDN) of the registry server.

The Registry Host Path is the file path on the registry server where the index exists. See your network administrator for assignment of these values if you want to make changes.

6.4 Finding the IP address of the DVR on the registry server

1. To find the IP address of the DVR when using DHCP, you need to search the registry server which the DVR is registered to. Use a computer connected to the internet and a standard browser. Enter the FQDN of the registry server into the browser to access the server.
2. After accessing the registry server, search for your DVR by name or MAC ID (Ethernet address). You can find your MAC ID by viewing the System Information page in the Web Administration page. Alternatively you can browse through all registered DVR units on the registry server to find your DVR.
3. Enter the IP address supplied by the registry server into your browser to access the DVR.

6.5 Using xDSL or cable Internet

You can connect the DVR to the Internet via xDSL or cable just as you would as normal computer. Connect the modem (router) according to the documentation.

- If a static public IP address is assigned to your xDSL or cable internet account, you must assign this to the DVR.
- If you are using ADSL or cable Internet and your modem (router) supports DHCP, set the DVR IP address to 255.255. 255.253. This requests the modem to assign an IP address.

You must register with a registry server to use dynamic addresses under DHCP. Follow the directions in Configuring Dynamic IP addresses on page 82 to register with a registry server.

6.6 Using PPPoE

If your xDSL or cable router uses PPPoE, an IP-sharing router is required, as the DVR does not support PPPoE. Regardless of whether you use a static IP address or a dynamic IP address, you will need to set the DHCP server IP address and IP forwarding but if you use a static IP address you do not need to register with a registry server.

1. Configure your IP-sharing router WAN side to connect with your modem. Connect the modem then connect the DVR to a LAN port on the router.
2. Configure your IP sharing router range of private IP addresses to prevent a conflict with the DVR default IP address. Alternatively you can reserve a private IP address for the DVR.
3. Attach a computer to another LAN port on the router. Configure the computer private IP address to prevent a conflict with the DVR.
4. In IrDA mode, configure the private IP address of the DVR.
5. If you are using a dynamic IP address, set the “registry Host IP “as described in the manual. Leave the “register HTTP Port “as field blank. Set “registry Host Path” to the path that holds the registry files. Set the IP forwarding of the router to forward the IP that requests standard HTTP port 80 to the reserved IP address. The router will then forward HTTP requests to the DVR. If you need FTP, set port 21 of the router to be mapped to the DVR. The VP-100 reboots after saving these changes.
6. Turn on your modem and IP-sharing router and connect to the Internet. To test whether the DVR has registered with the registry server, you need to access the server using a computer outside the IP sharing router LAN. If you are using a dynamic IP address, access the registry server, then search for your DVR. If you are using a static IP address, access that address to test if the LAN has been successfully set up.

7. Find the MAC ID of your DVR. The MAC ID includes the TCP/IP port value you entered before. Other client PCs on the network to find the DVR on the registry server can then use the MAC ID.

6.7 Using dial-up Internet

You can set up the DVR for Dial-up Internet access under ISP in the menu system. You must enter your Internet service provider telephone number, your user name and password. You can also manually configure the TCP/IP.

Note : We strong recommend you not to access DVR using dial-up , it may cause internet drop down.

6.8 Remote access using dial-up

You can access the DVR remotely without the Internet by using a dialup modem. The DVR must be working under Network mode.

1. Connect a dial-up modem and phone line to the DVR COM1 port.
2. Set COM1 to modem device in the DVR system menu.
3. On the remote PC, create a new dial-up setting (Windows).
4. Set the protocol to PPP.
5. Clear all advanced options and allowed network protocols except TCP/IP.
6. Set the IP address to 10.0.0.2.
7. Put a check mark in the server assigned server address box, uncheck “use IP header compression” and “use default gateway” on the network boxes. Then click OK.
8. Enter the number of the phone line connected to the DVR, as well as the administrator user name and password.
9. To access the DVR, use IE 6.0 SP2. Bring up IE on the PC and then access to 10.0.0.1.

Note: As this is a PPP connection, only one user can access the DVR at a time.

Appendix A: Recommendation Motherboard

We have tested some different motherboards for VP-100. If You are first time to plug and play VP-100.We suggest you to choose the motherboard which have been tested by us for better performers。

◆ **Suggesting CPU model：**

Pentium 4, 1.6G or better

◆ **Motherboard：**

1. North bridge：Intel chipset
2. South bridge：ICH2, ICH4, ICH5 & ICH5R
3. Others： We need 5 PCI slots at the least for expand

◆ **Memory :**

DDR 256MB or above

DDR512MB for MPEG4 compression standard

◆ **AGP VGA Card：**

nVidia Gforce4 MX400 / MX440 / MX4000(support TV-OUT)

ATI Rage 128 / ATI 9200 / ATI 7000 (ATI no support TV-OUT)

◆ **PCI-Express VGA Cards :**

nVidia Geforce NX62/00/NX6600 (mouse mode only)

ATI X300SE (VGA Monitor only)

◆ **Motherboard：**

Socket 478 Motherboards* (M/B)

Motherboard Brand & Model #	Chipset
Asus P4P800-SE	Intel 865PE
Asus P5P800S	Intel 848P ICH5
Asus P4P800-MX (Micro ATX, 3xPCI)	Intel 865PE
MSI Neo2-V	Intel 848P ICH5
MSI 865GM2-LS (Micro ATX, 3xPCI)	Intel 865G (integrated graphics support)
Albatron PX865PEC Pro	Intel 865PE

Socket 775 Motherboards* (M/B)

Motherboard Brand & Model #	Chipset
VPON VP-MB945G	Intel 945G
GIGABYTE GA-8I945P-G	Intel 945P
GIGABYTE GA-8I915P DUO	Intel 915P
Intel D915PCY (VP-100 Only)	Intel 915P
Asus P5P800 SE	Intel 865PE
Gigabyte GA-8I848P	Intel 848P
MSI Neo3-V MS-7097 Ver1 N1996	Intel 865PE
Albatron PX865PEC Pro	Intel 865PE

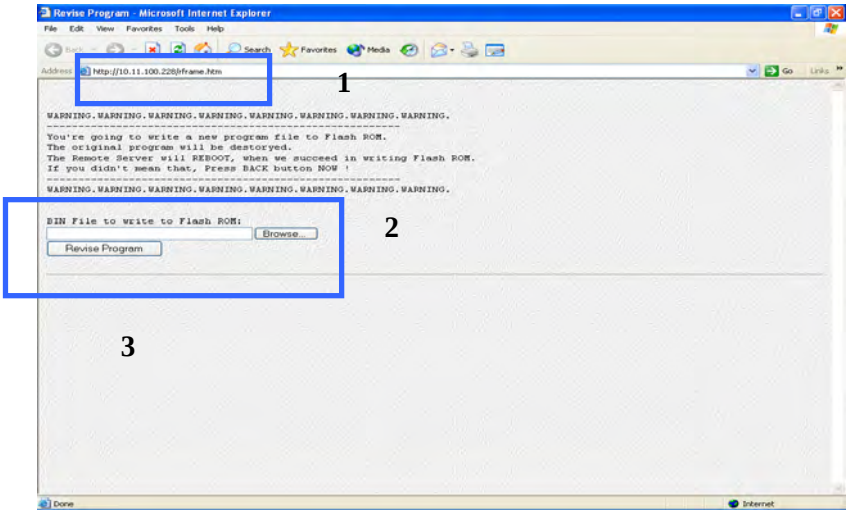
*Supported motherboards as of April 20, 2006

Appendix B: Guide to Revise Firmware of DVR

Step-by-step instructions for revising/upgrading firmware of the DVR

- **Use revise.htm**

1. If you want to download and update the system firmware, please check with your distributor to verify eligibility.
2. Open Windows Internet Explorer and type in your DVR IP address like this: "http://DVR IP/revise.htm"



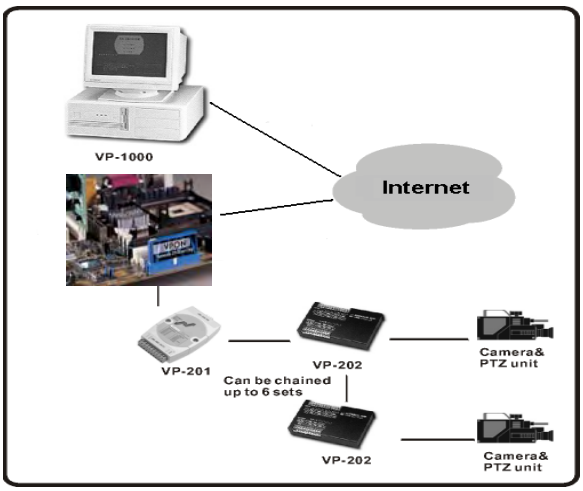
3. Browse for the saved copy of the updated firmware and click revise program then start to the update process.
4. The DVR will reboot automatically after the revision is complete.

Appendix C: Remote Camera Control

There are two kind of remote camera control configuration. One is using PTZ cameras with built-in RS232 or RS485 interface; the other one is using VP-201 and VP-202 camera control interfaces to accomplish the job. DVR hardware box, and Internet browsers are transparent to both configurations. VP-201 and VP-202 are considered as external devices to DVR.

- **Remote Camera Control using VP-201 and VP-202**

If you are using traditional CCTV camera with NO built-in PTZ control and want to do PTZ functions, you can use VP-201 & VP-202 combination for this purpose. VP-201 is a RS-232 to RS485 converter and VP-202 is a power relay device to drive a PTZ mechanism that carries a traditional CCTV camera. On VP-202, there are 8 pairs of power IOs that can survive at 0.5A/120ac or 1A/24VDC for attaching to PTZ mechanism. Please check the correct voltage ratings of your PTZ mechanism and make the right connections. After physical connection is done, please enter "**advance setting**" either from OSD or accessing DVR main page from its IP address. Select "**system configuration**"->"**set camera control**" and then choose "**VP-202 camera control**" as the camera control device. Operation procedure is basically the same as built-in PTZ camera.



Appendix D: Voice Modem

Below provides this model voice modem to supply the customer reference. User can select this model to make a call when the event occurs.

MC56EXV

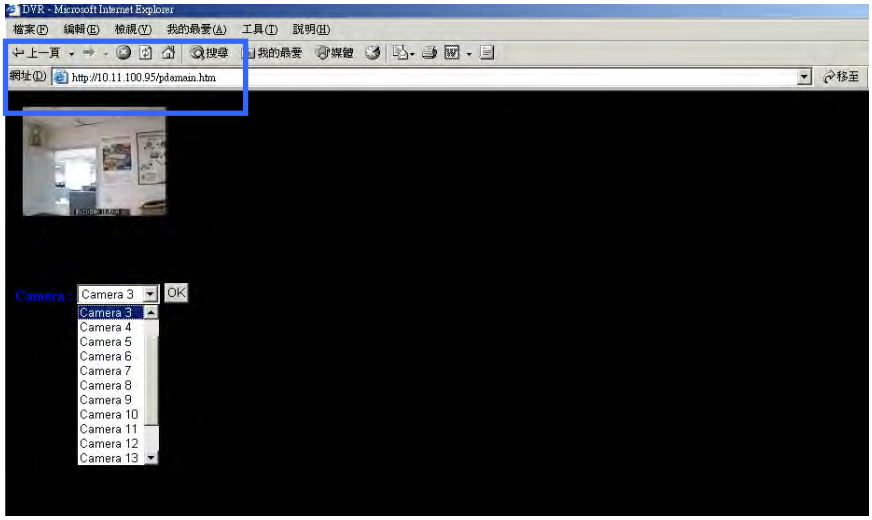
VOICE/FAX MODEM Specifications:

	Data Fax (POTS)
Features:	Speakerphone
	Voice
Max Communication Protocol:	V.90 / V.92
Communication Buses:	RS-232 Serial

Appendix E: View video by PDA or Cell phone

User can get the DVR video by typing the IP address (http://DVR IP/pdamain.htm) on the Internet Explore in your cell phone or PDA.

1. Open a browser window on a terminal that has network access to the VP-100.
2. Type the IP address (http://DVR IP/pdamain.htm) of the VP-100 in the browser address bar.
You can view video as following:



Appendix F: NET I/O (optional)

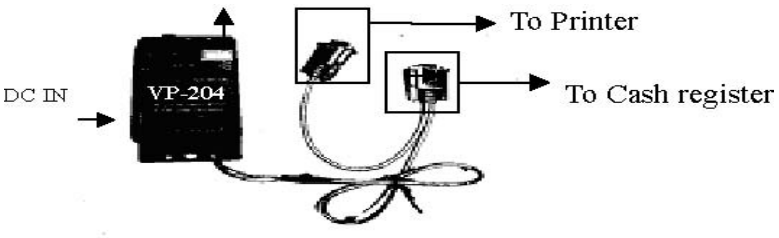
One DVR can offer to connect sixteen cash registers. We provide two devices to connect DVR and cash registers .one of device is VP-204 (NET I/O device) for connecting one cash register, the other one device is VP-204Q (NET I/O device) for connecting four cash registers at the same time. If you hope sixteen cash registers to connect to one DVR, you need sixteen VP-204 devices or four VP-204Q devices.

VP-204 installation :

1. Connect corresponded color wire of the cable into VP-204 NET I/O Device
2. Follow the pictures bellow for installation.

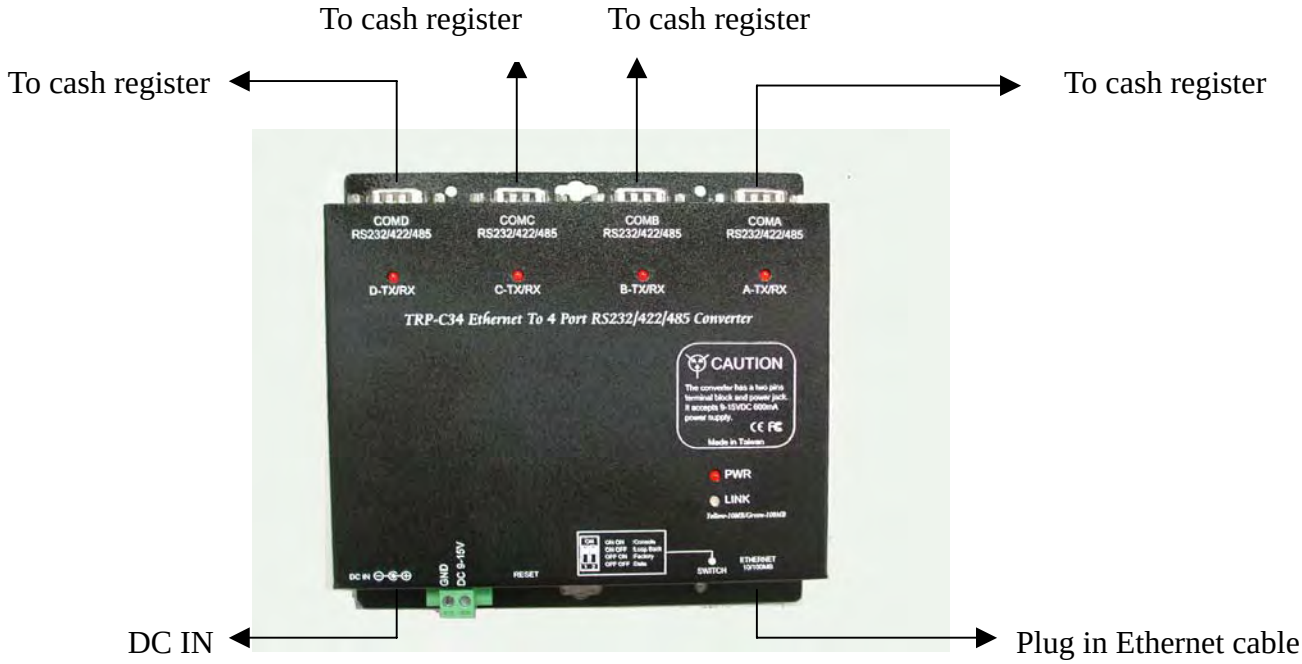
3.

Plug in Ethernet cable



4. Connect POS to Ethernet Hub by the Ethernet cable.

VP-204Q installation :



Software Set up

1 After hardware setting up, power on the DVR.
2 Go to the system menu and select “Serial Port” function to set up interface.
3 DVR detects NET I/O automatically and NET I/O will be displayed.
Note: If you plug-in many NET I/O devices, you will see VP204-1, VP204-2…in the serial port menu screen then you can set it out separately.
4 ID and connection status are displayed
5 VP204-1 Device – Select the Data capture.
6 VP204-1 Speed- Select the same Baud rate as your POS machine.
7 VP204-1 Camera –Select the camera channel that you wish POS transaction data to integrate with.
Select ”<< Rescan >>”option and select ok button to redetect NET I/O device again to make sure your setting is correct.
DVR will reboot after setting up and exit serial port menu.
Finishing the device setup and back to the live video. You can try to send out some data from POS machine then POS text should appear on the screen.

Note:
1)VP-204 - Power consumption: 1.2W(max)
Power requirement: DC 10-30V
Interface: 10Mbps
2)VP-204Q – Power requirement : Input:120V AC 60HZ
Output : 12V DC 400ma
3) DVR and NET I/O device should be in the same LAN segment, if you have many DVR. Each DVR must be separated in different LAN segment by router.

Appendix G: Troubleshooting

1. General

Q: Network indicator is not lit.

1. Check the network cable connection
2. Verify the network is working, you can ping an existing device on the network.
3. Power off DVR, wait at least 20 seconds, power on DVR and verify again.

Q: Bad video quality.

1. Raise the video quality setting.
2. Check video quality from cameras.
3. Adjust VGA color to be at least 65536 color.
4. Try adjusting 75 Ohm terminating resister.

Q: No video

1. Check video cable, connector, power of camera. Use a TV set to verify the functionality of cameras.
2. Check the corresponding Q&A of each running mode of DVR for this problem.

Q: Cannot control PTZ camera

1. Check cable connection and power of the camera.
2. COM2 parameters are not correct, or not accommodate with the PTZ device.
3. ID of the PTZ camera is not set correctly.
4. Switch the power of both DVR and PTZ camera.
5. DVR do not support this type of PTZ camera.

2. Network Mode

Q: Cannot access DVR from browser.

1. Verify network cable is well connected to hub and the network is good.
2. Make sure you are using IP in the same subnet of DVRN.
3. Clear the ARP list.
4. If you are running MS Proxy Client on your PC, and the IP assigned to DVR is not a valid local IP on the network. Try to allocate a valid local IP to DVR or disable MS Proxy Client from the Control Panel.
5. If you can ping the IP of DVR, disconnect DVR from network and ping this IP again. If there is a response, then you have a duplicated IP address on the network.
6. Clear your browser's cache and make browser to check if there is newer version of web page at every visit.
7. If you still cannot access DVR, try disable proxy in your browser.

Q: You can access DVR in intranet, but failed to access it in internet.

1. Verify your intranet is connected to internet.
2. Verify if a valid public IP is assigned to DVR or a valid public IP is mapped to a valid local IP assigned to DVR.

Q: No Video.

1. Reload this page.
2. Check the General Q&A about this problem.
3. Clear your browser's cache and make browser to check if there is newer version of web page at every visit.

Q: If you can access video of DVR in intranet, but failed to access video from internet:

1. Check the settings of firewall and proxy server. DVRN use standard HTTP protocol and port 80. It might be necessary to enable those video MIME types (video/x-nficwmh263 and video/x-nficwmhjpeg) of DVR to be granted by your firewall or proxy server. Also check if they allow large data transmission.
2. Disable proxy server settings of your browser.

Q: Browser stops responding on mouse click

1. You are opening too many video strings.
2. You are opening more than one video string from the same camera.
3. Your PC is too slow, upgrade and accelerate your system.